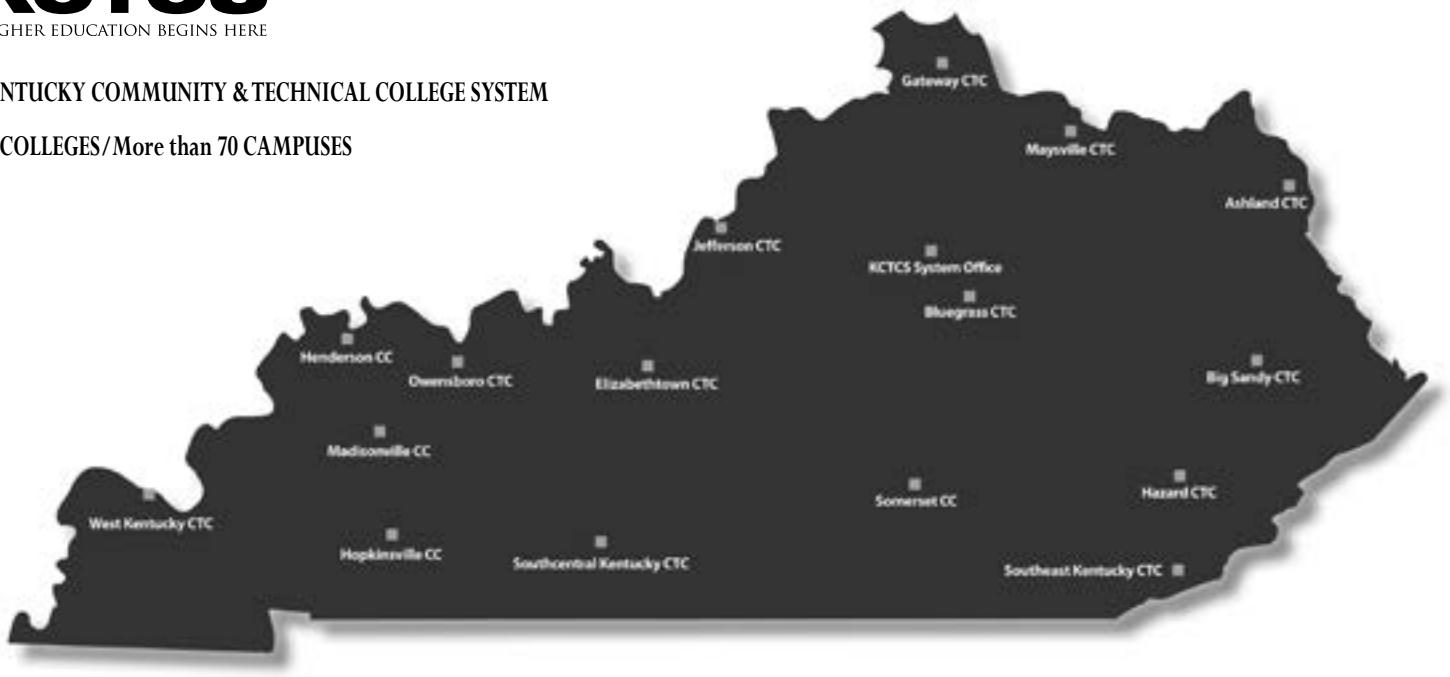
KCTCS | CATALOG **2016-2017**

KENTUCKY COMMUNITY & TECHNICAL COLLEGE SYSTEM

KCTCS
HIGHER EDUCATION BEGINS HERE

KENTUCKY COMMUNITY & TECHNICAL COLLEGE SYSTEM

16 COLLEGES/More than 70 CAMPUSES



Kentucky Community and Technical College System
300 North Main Street
Versailles, KY 40383
877.KCTCS.4U (toll-free)
877.528.2748
859.256.3100

KCTCS COLLEGES

Ashland Community and Technical College
ashland.kctcs.edu
800.928.4256 (toll-free)

Big Sandy Community and Technical College
bigsandy.kctcs.edu
888.641.4132 (toll-free)

Bluegrass Community and Technical College
bluegrass.kctcs.edu
866.774.4872 (toll-free)

Elizabethtown Community and Technical College
elizabethtown.kctcs.edu
877-246-2322 (toll-free)

Gateway Community and Technical College
gateway.kctcs.edu
859.441.4500

Hazard Community and Technical College
hazard.kctcs.edu
800.246.7521 (toll-free)

Henderson Community College
henderson.kctcs.edu
800.696.9958 (toll-free)

Hopkinsville Community College
hopkinsville.kctcs.edu
270.707.3700

Jefferson Community and Technical College
jefferson.kctcs.edu
502.213.5333

Madisonville Community College
madisonville.kctcs.edu
270.821.2250

Maysville Community and Technical College
maysville.kctcs.edu
606.759.7141

Owensboro Community and Technical College
owensboro.kctcs.edu
866.755.6282 (toll-free)

Somerset Community College
somerset.kctcs.edu
877.629.9722 (toll-free)

Southcentral Kentucky Community and Technical College
southcentral.kctcs.edu
855.246.2482 (toll-free)

Southeast Kentucky Community and Technical College
southeast.kctcs.edu
888.274.7322 (toll-free)

West Kentucky Community and Technical College
westkentucky.kctcs.edu
270.554.9200

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The KCTCS Catalog serves as the students' guide to academic programs and services that our colleges provide. Students who enroll in an academic program should fulfill requirements as they exist at the time of such enrollment. If requirements change while the student is enrolled in a program, he/she may fulfill either the new or old requirements.

KCTCS makes every effort to include relevant, timely, and accurate information in the Catalog. However, KCTCS reserves the right to make changes in the calendar, admission policies, expenses, programs, curricula, course descriptions, or any other matters addressed or not addressed in this publication. Prospective students and enrolled students should check with college admission officers and academic advisers to learn of any changes. Also, some updates may be included in the online version of the Catalog located at kctcs.edu.

Message from Dr. Jay Box, KCTCS President

I'm so happy you're considering improving your education and your life! My goal is for you not only to enter college, but also to complete college, and you're taking that first important step by checking out the programs and classes we offer. With campuses close to you and hundreds of online offerings, I'm sure you'll find just what you're looking for.

You're making a smart choice by choosing one of the 16 KCTCS colleges. Our tuition is the lowest in the state – less than half of what you'd pay at a four-year university. As you prepare to move forward in your higher ed journey, our faculty and staff will be there with you every step of the way. Our role is to make sure you succeed, so please let us know what we can do to help. If you have questions about anything you see in the catalog, how to enroll, financial aid or any other concern, contact the KCTCS college nearest you or call 1-877-KCTCS-4U (1-877-528-2748). Our Go KCTCS! call center never closes, so anytime you have a question, someone will be there to answer it. You'll also find more information about our colleges at kctcs.edu.

On behalf of the entire KCTCS family of colleges, I wish you the best of luck in your educational endeavors.

Sincerely,

Jay K. Box

Jay K. Box, Ed.D.
President, KCTCS

History and Functions of KCTCS

The Kentucky Community and Technical College System (KCTCS) was created by the 1997 Kentucky Postsecondary Education Improvement Act. Since then, KCTCS has been on a journey of phenomenal growth and success.

KCTCS' 16 statewide, two-year colleges provide quality postsecondary education and workforce training. The more than 70 campuses are strategically located across the Commonwealth, from Ashland to Paducah, from Covington to Bowling Green, all within a 30-minute drive of 95 percent of all Kentuckians.

KCTCS colleges confer three types of credentials upon students who complete credit programs — certificates, diplomas and associate degrees including: associate in arts, associate in science and associate in applied science —. There are more than 700 career-related programs offered by the System – many in high growth, high wage fields. Additionally, KCTCS is the largest provider of online learning in the state offering more than 77 online programs.

KCTCS programs target high growth industry sectors such as healthcare, manufacturing, energy, IT/business and transportation/logistics. KCTCS forges partnerships between colleges and businesses to provide Kentucky workers with the skills required today and to help industries and individuals develop the capabilities they will need tomorrow. It is the largest provider of workforce training, serving nearly 6,000 businesses in 2015..

Last year alone, KCTCS trained and educated:

- More than 116,000 credit-seeking students.
- 80 percent of Kentucky-trained firefighters.
- 69 percent of the state's total allied health credentials.

KCTCS institutions offer a wide range of student services. Students are eligible for federal financial aid and a variety of need and merit-based scholarships. KCTCS colleges are also the best value in postsecondary education in Kentucky, with the lowest tuition in the Commonwealth.

Each KCTCS college has enhanced efficiency and service by consolidating functions, support services and programs and by pursuing single accreditation under the Commission on Colleges of the Southern Association of Colleges and Schools (SACS). Our mission is to improve the lives and employability of Kentuckians.

To learn more about KCTCS, visit kctcs.edu.

Mission Statement

Kentucky Community and Technical College System

The mission of KCTCS is to improve the employability and quality of life of Kentucky citizens as the primary provider of:

- College and Workforce Readiness.
- Transfer Education.
  Workforce Education and Training.

Academic Calendar

In order to be responsive to the needs of communities and students, KCTCS institutions offer terms in a variety of lengths from two weeks to 16 weeks. The two primary terms begin in August and January. The colleges offer shorter sessions within these two terms, allowing students the flexibility to schedule classes to best meet their needs. A variety of sessions from two to eight weeks are also available during the summer months.

All KCTCS colleges follow a common policy for establishing important dates within each session such as deadlines for adding and dropping classes and receiving refunds. Students should contact the Records/Admission office at their local college for the local academic calendar.

The following closings are applicable to all KCTCS institutions:

July
4 Independence Day observed

September
5 Labor Day

November
24 Thanksgiving Day
25 Day After Thanksgiving

December
19 Institutional Closing
20 Institutional Closing
21 Institutional Closing
21 Institutional Closing
23 Institutional Closing
26 Institutional Closing
27 Institutional Closing
28 Institutional Closing
29 Institutional Closing
30 Institutional Closing

January
16 Martin Luther King Day

February
20 President's Day

April
14 Good Friday (1/2 Day)

May
29 Memorial Day

KCTCS Leadership*

** This page reflects KCTCS leadership as of July 1, 2016*

KCTCS Board of Regents

Ms. Marcia L. Roth, Chair
Dr. Gail R. Henson, Vice Chair
Ms. Carolyn E. "Betsy" Flynn, Secretary
Mr. Robert G. Cooper
Ms. Venus R. Evans
Dr. Angela Fultz
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Mr. James Lee Stevens
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Ms. Tammy C. Thompson
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Foundation Board of Directors

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Dr. Jay K. Box, Ex-Officio Member
Timothy R. Burcham, CFRE, Ex-Officio Member

President

Dr. Jay K. Box

President's Cabinet

Dr. Jay K. Box, President
Mr. Timothy R. Burcham, CFRE, Vice President
Dr. Paul B. Czarapata, Vice President
Ms. Beth R. Hilliard, Chief of Staff
Mr. Wendell A. Followell, Vice President
Dr. Gloria S. McCall, Vice President
Dr. Rhonda R. Tracy, Chancellor

College Leadership

Ashland Community and Technical College
Dr. Patricia K. Adkins
President/CEO

Big Sandy Community and Technical College
Dr. G. Devin Stephenson
President/CEO

Bluegrass Community and Technical College
Dr. Augusta A. Julian
President/CEO

Elizabethtown Community and Technical College
Dr. Thelma J. White
President/CEO

Gateway Community and Technical College
Dr. Fernando Figueroa
President/CEO

Hazard Community and Technical College
Dr. Jennifer Lindon
President/CEO

Henderson Community College
Dr. Kristin T. Williams
President/CEO

Hopkinsville Community College
Dr. Jay S. Allen
President/CEO

Jefferson Community and Technical College
Dr. Ty Handy
President/CEO

Madisonville Community College
Dr. Cynthia Kelley
President/CEO

Maysville Community and Technical College
Dr. Stephen Vacik
President/CEO

Owensboro Community and Technical College
Dr. Scott Williams
President/CEO

Somerset Community College
Dr. Jo Marshall
President/CEO

Southcentral Kentucky Community and Technical College
Dr. Phillip W. Neal
President/CEO

Southeast Kentucky Community and Technical College
Dr. F. Lynn Moore
President/CEO

West Kentucky Community and Technical College
Dr. Charles Chrestman
Interim President/CEO

Ashland Community and Technical College

Mission Statement/Status of Accreditation

Ashland Community and Technical College, a member of the Kentucky Community and Technical College System, is a public, two-year degree granting institution located in Northeast Kentucky. The College supports a variety of excellent associate degree, diploma, and certificate programs with a tradition of accessible, affordable, and quality education. The College prepares students for transfer to baccalaureate programs or entry into the workforce, and has a strong commitment to meet their academic, workforce training, and lifelong learning needs.

Teach with excellence. Serve with passion. Learn for life.

Ashland Community and Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Ashland Community and Technical College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution's significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula

- Associate in Arts
- Associate in Science

Occupational/Technical Curricula

Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

- Air Conditioning Technology (C, D)
- Appalachian Studies (C)
- Applied Process Technologies (C, A)
- Automotive Technology (C, D)
- Business Communications (C)
- Business Foundations (C)
- Business Studies:
  - Administrative Office Technology (C, D, A)
  - Business Administration Systems (C, D, A)
  - Medical Information Technology (C, D, A)
- Computer Aided Drafting and Design (C, D)
- Computer and Information Technologies (C, D)
- Computerized Manufacturing and Machining (C, D)
- Cosmetology (C, D)
- Criminal Justice (A, C)
- Culinary Arts (C, D, A)
- Dental Assisting (D)
- Diesel Technology (C, D)
- Emergency Medical Services – Paramedic (C, D)
- Emergency Medical Technician (C)
- Fire/Rescue Science Technology (C, D, A)
- General Occupational/Technical Studies (A)
- Health Science Technology (A)
- Interdisciplinary Early Childhood Education (C, D, A)
- Manufacturing Industrial Technology:
  - Electrical Technology (C, D)
  - Industrial Maintenance Technology (A, C, D)
- Medical Assisting (C)
- Nursing (A)
- Pharmacy Technology (C, D)
- Practical Nursing (C, D)
- Respiratory Care (A)
- Surgical Technology (D)
- Welding Technology (C, D)

Contact Information

Ashland Community and Technical College
1400 College Drive
Ashland, KY 41101
(606) 326-2000, (800) 928-4256
ashland.kctcs.edu

College Drive Campus (CDC)

Roberts Drive Campus (RDC)

Technology Drive Campus (TDC)

General Information

Admissions	(606) 326-2413
Advising Center	(606) 326-2228
Adult Education and Literacy	(606) 326-2457
Business Office	(606) 326-2041
Center for Community, Workforce and Economic Development	(606) 326-2129
Community and Technical College Foundation	(606) 326-2071
Disability Services	(606) 326-2051
Financial Aid	(606) 326-2198
Human Resources	(606) 326-2044
Library	(606) 326-2169
Lifelong Learning	(606) 326-2072
Public Relations	(606) 326-2134
Records	(606) 326-2035
Veterans Affairs	(606) 326-2275
Website (webmaster)	(606) 326-2090

Administration

President – Dr. Kay Adkins	(606) 326-2043
Dean of Academic Affairs – Dr. Janie Kitchen	(606) 326-2162
Associate Dean of Academic Affairs – Dr. Keith Brammell 606-326-2426	
Dean of Business Affairs – Karen Blevins	(606) 326-2063
Dean of Resource Development and External Affairs –Willie McCullough	(606) 326-2068
Dean of Institutional Planning, Research and Effectiveness – Steve Flouhouse	(606) 326-2055
Dean of Public Services– John McGlone	(606) 326-2400
Dean of Student Affairs – Steven Woodburn	(606) 326-2077
Associate Dean of Advising and Student Retention – Cris McDavid	(606) 326-2003
Associate Dean of Information Technology – Farnoosh Rafiee	(606) 326-2069
Associate Dean of Admissions and Records/ Registrar –	(606) 326-2064

Director of Financial Aid – Robin Lewis (606) 326-2423
Director of Cultural Diversity – Al Baker (606) 326-2422
Division of Business Education, Social Sciences and Technology – Molly Webb (606) 326-2231
Acting Division of Health Sciences – Janie Kitchen (606) 326-2163
Division of Humanities – (606) 326-2142
Division of Manufacturing, Transportation and Industrial Technologies – Dr. Keith Brammell (606) 326- 2426
Division of Math and Natural Sciences – Dr. Nicole Griffith-Green (606) 326-2236

Faculty

Allen, Joseph D, Instructor, MSN, Chamberlain College of Nursing, 2015
Alley, Alan C, Assistant Professor, DC, Palmer College of Chiropractic, 1998
Bailey, Danny G, Professor, MS, University of Kentucky, 1971
Bayes, Nenna L, Professor, MA, Morehead State University, 2001
Blair, Kathy L, Assistant Professor, MSN, University of Phoenix, 2012
Boggs, Christopher J, Associate Professor, AAS, Institute of Electronics Technology, 1992
Borders III, Andrew J, Associate Professor, MS, Southwestern Baptist Theological Seminary, 1989
Bowman, Curtis D, Professor, Certification, Collins Career Center, 1979
Bradley, Belinda, Associate Professor, AAS, Southern West Virginia Community and Technical College, 2007
Bradley, John M, Associate Professor, Certification, National Institute for Automotive Service Excellence, 1999
Bradley, Peggy L, Associate Professor, BS, Morehead State University, 1979
Brammell, Keith, Professor, DMD, University of Kentucky, 1985
Brown, Sara A, Associate Professor, MSLS, University of Kentucky, 2003
Bryant, Sheree Nicole, Associate Professor, BUS, Morehead State University, 2010
Cassady, Jeffrey M, Instructor, AAS, Ashland Community and Technical College, 2013
Cavins, Jacqueline L, Associate Professor, BS Morehead State University, 2002
Childress, David C, Associate Professor, Morehead State University, 1985
Conley, Richard R, Professor, MS, University of Kentucky, 1973
Cooksey, Daniel P, Associate Professor, MS, Marshall University, 1979
Cullum, Randolph, Associate Professor, MA, Marshall University, 1981
Davis, John Mark, Associate Professor, MBA, Morehead State University, 1985
Davis, Virgil K, Professor, MA, Morehead State University, 1986
Edwards, Kathryn Hare Tucci, Professor, MA, Marshall University, 1991
Kiser, Joshua L, Instructor, Certified Welder, 2009
Figgins, Edward E, Associate Professor, BA, Morehead State University, 1988
Flath, Mary C, Professor, PhD, Medical University of South Carolina, 1991
Flouhouse, Steven D, Professor, MS, Marshall University, 1991
Fosson, Woodrow, Instructor, Associate of Applied Technology, ACTC, 2001
Fosterwelsh, Wendy, Professor, MFA, Georgia Southern University, 2004
Frailie II, Donald L, Associate Professor, JD, University of Kentucky, 1974
Frye, Bettie E, Professor/Librarian I, MLS, University of South Carolina, 1989
Griffith-Green, Nicole, Associate Professor, EdD, University of the Cumberlands, 2015
Hall, James C, Instructor, MA, University of Louisville, 2014
Hall, Ralfred J, Professor, MS, Morehead State University, 1993
Henderson, Rachel, Assistant Professor, MSN, Chamberlain College of Nursing 2012
Henry, Harold Edmond, Associate Professor, AAS, Ashland Technical College, 2002
Howard, Warren H, Associate Professor, MA, Morehead State University, 2003
Howerton, Deena, Instructor, BSN Bellarmine College 2002
James, Jesse J, Assistant Professor, AAS, Ashland Community and Technical College, 2010
Johns, Robin D, Instructor, AME, Morehead State University, 1987
Joy, Jonathan, Instructor, MA, Marshall University, 2004
Justice, Debra, Associate Professor, MA, Marshall University, 1997
Kitchen, Janie R, Professor, PHD, Case Western Reserve University, 2011
Klinepeter, Pamela, Associate/Librarian II, MLS, University of Kentucky, 2005
Kumar, Ramamurthy Chandra, Professor, MS, Florida Institute of Technology, 1986
Mahan, Daniel, Associate Professor, MA, Samford University, 1984
Martin, Frances, Assistant Professor, AME, Morehead State University, 1994
McCarty, Shannon, Associate Professor, Certificate, Collins Career Center, 1990
McCullough, Willie G, Associate Professor, MA, Marshall University, 1981
McCumbee, Jame, Assistant Professor, MA, Marshall University, 1995
McDavid, Cristina C, Professor, MBE, Morehead State University, 1987
McGinnis, Elizabeth, Associate Professor, MSN, University of Phoenix, 2014
McGinnis, Vicki, Assistant Professor, MA University of Kentucky, 1994
McGlone, John K, Associate Professor, MS, Morehead State University, 1994
Mengistu, Aschalew, Assistant Professor, PhD, University of Wales College of Medicine, 2002
Merritt, Richard P, Assistant Professor, MA, Marshall University, 2011
Mohebbian, Hossein, Professor, MA, Marshall University, 1983
Music, Stephen L, Assistant Professor, AAS, Big Sandy Community and Technical College, 2012
O'Pell, Donald Ray, Professor, MS, Marshall University, 1984
Rafiee, Farnoosh, Professor, MA, Marshall University, 1982
Ratliff, Terri Lynn, Assistant Professor, BSN, Marshall University, 1993
Riggs, Mark, Assistant Professor, MS, Mississippi State University, 2000
Roark, Mary L, Assistant Professor, MSN, Bellarmine University, 2007
Robinson, Natalie, Assistant Professor, MSN, Bellarmine University, 2007
Schmidt, James C, Professor, PhD, Cincinnati, 1976
Sergent, William K, Instructor, BS, Liberty University, 2005
Shelton, Cynthia, Associate Professor, AME, Marshall University, 1992
Shortridge, Mary E, Professor, MA, Morehead State University, 1982
Skidmore, Ashley, Assistant Professor, MA, University of Kentucky, 2006
Smith, Mark S, Instructor, BS, Morehead State University, 1999
Smith, Mourine k, Instructor, AAS, Somerset Community College, 2010
Stevens, Tyler B, Instructor, AAS, Ashland Community and Technical College, 2009
Swetnam, Mark R, Professor, MA, University of Kentucky, 1990
Tackett, Michael B, Instructor, AS, Ashland Community and Technical College, 2008
Thornton, Jack D, Associate Professor, AAS, Columbus State University, 1986
Tussey, Laura L, Assistant Professor, MA, Marshall University, 2000
Wallace-Vernatter, Susan Y, Instructor, BS, Bellevue University, 2008
Webb, Molly J, Associate Professor, MBA, Bellarmine College, 1982

Big Sandy Community and Technical College

Mission Statement/Status of Accreditation

Big Sandy Community and Technical College provides accessible quality educational opportunities for student success, promotes economic growth and enhances the quality of life of its constituents.

Big Sandy Community and Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Big Sandy Community and Technical College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution's significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula

Associate in Arts
Associate in Science

Occupational/Technical Curricula

Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

Air Conditioning Technology (C, D, A)
Applied Engineering Technology (C)
Auto Body/Collision Repair Technology (C, D)
Automotive Technology (C, A)
Broadband Technology (A)
Business Communications (C)
Business Foundations (C)
Business Studies:
- Administrative Office Technology (C, D)
- Business Administration Systems (C, D, A)
- Medical Information Technology (C, D, A)

Civil Engineering Technology (A)
Computer Aided Drafting and Design (C, D)
Computer and Information Technologies (C, A)
Computerized Manufacturing and Machining (C, D, A)
Construction Technology (C, D)
Cosmetology (C, D)
Criminal Justice (C, A)
Culinary Arts (C, D)
Dental Assisting/Dental Hygiene (D, A)
Diesel Technology (C, D)
Emergency Medical Technician (C)
Energy Technologies (C)
Engineering and Electronics Technology (C, D, A)
Fire/Rescue Science Technology (C, D, A)
General Occupational/Technical Studies (A)
Health Science Technology (A)
Human Services (C, A)
Interdisciplinary Early Childhood Education (C)
Manufacturing Engineering Technology (C)
Manufacturing Industrial Technology:
Electrical Technology (C, D, A)
Industrial Maintenance Technology (C, D, A)
Masonry (C, D)
Mining Technology (C, A)
Motorcycle Technology (C, A)
Nursing (A)
Nursing Assistant –Advanced (C)
Physical Therapist Assistant (A)
Practical Nursing (C, D)
Plumbing (C)
Respiratory Care (C, A)
Surgical Technology (D, A)
Surveying & Mapping Technology (C, D, A)
Truck Driver Training (C)
Visual Communication
- Design and Technology (C, D, A)
- Multimedia (C)
- Printing (C, D)

Welding Technology (C, D, A)

Contact Information

Prestonsburg Campus
1Bert T. Combs Drive
Prestonsburg, KY 41653
(606) 886-3863
bigsandy.kctcs.edu

Pikeville Campus
120 South Riverfill Drive
Pikeville, KY 41501
(606) 218-2060
bigsandy.kctcs.edu

Mayo Campus
513 Third Street
Paintsville, KY 41240
(606) 789-5321
bigsandy.kctcs.edu

Hager Hill Campus
150 Industrial Park Road
Hager Hill, KY 41222
(606) 789-5321
bigsandy.kctcs.edu

General Information

606-886-3863 or 1-888-641-4132

(Toll free – outside of Floyd, Johnson & Pike counties)

Academic Affairs (Program Information)	(606)886-7342
Admissions & Records Office	(606) 886- 3863 Option 2
Business Office	1-855-G0-BSCTC (1-855-462-7282)
Center for Student Engagement	(606) 889-4840
Career Education & Workforce Development	(606) 218-1276
Disability Services	(606)886-7359
Financial Aid	1-855-GO-BSCTC (1-855-462-7282)
Library	(606)889-4834
Marketing and Communications	(606) 889-4703
President's Office	(606) 886-7332
Security	(606) 886-7335
Student Services	(606) 889-4822
Website	(606) 886-7395

Administration

President	Dr. Devin Stephenson
Chief Institutional Officer	Bobby McCool
Chief Business Affairs Officer	Michelle Meek
Interim Chief Academic Officer	Myra Elliott
Dean of Career Education & Workforce Development	Kelli Hall
Dean of Institutional Effectiveness and Institutional Research	Dr. Chris Daniel
Dean of Student Services	Jimmy Wright
Director of Enrollment Management	Billie Jean Cole (606) 889-4808
Director of Advising	Susan Chafin (606) 889-4840
Director of East Kentucky Science Center and Planetarium	Steven L J Russo (606) 889-4809
Director of Facilities, Safety and Auxiliary Services	John Herald (606) 886-7335
Director of Financial Aid	Cathy Hurd-Crank 1-855-GO-BSCTC
Director of Fine Arts	Clayton Case (606) 886-7388
Director of Human Resources	Bryen L. Goble (606) 889-4724
Director of Library Services	Kathy Lowe (606) 889-4748
Director of College Relations	Joshua L. Ball (606) 889-4703
Facilities Management Specialist	Emma Jean Howard McCoy (606) 889-4710

Faculty

Adam, Kelly J, Professor, MS, Southern Connecticut University, 1993
Akhlaghi, Mohammad R, Professor, PhD, University of Oregon, 1978
Allen, Collista, Associate Professor, MSN, University of Phoenix, 2013
Azeem, Arif, Professor, MS, Western Michigan University, 1982
Baldridge, Harold, Assistant Professor, BS, University of Kentucky, 1968
Ball, Tammy, Professor, MA, University of Louisville, 1996
Barlow, Donald L, Associate Professor, PhD, Ball State University, 1987
Bays, Leslie M, Assistant Professor, MA, Morehead State University, 2010
Bell, Daniel E, Professor, MA, Northern Illinois University, 1986
Bennin, Hope E, Professor, MA, University of Wisconsin, 1987
Bowman, William, Instructor/Librarian IV, MS, University of Kentucky, 2008
Brooks, Michael Aaron, Instructor, Diploma, Mayo State Vocational-Technical School, 1993
Burchett, Nicole, Associate Professor, MSN, Northern Kentucky University, 2015
Cantrell, Etta L, Professor, MHE, Morehead State University, 1985
Carroll, Charlene, Assistant Professor, MSN, University of Kentucky, 1996
Carroll, John, Professor, MA, Morehead State University, 1999
Chafin, Susan K, Professor, MBE, Morehead State University, 1989
Cole, Elizabeth M, Professor, MA, University of Iowa, 1989
Compton, Joseph L, Professor, BS, Morehead State University, 2013
Conn, Stephania, Assistant Professor, BS, Eastern Kentucky University, 1997
Daniel, Christopher A, Professor, EdD, Liberty University, 2013
Dempsey, Jeremy, Associate Professor, MA, Marshall University, 2005
DeRossett, Kimberly R, Professor, BSN, Eastern Kentucky University, 1984
Dickerson, Cindy, Associate Professor, MA, Morehead State University, 2008
Dixon, Eric, Associate Professor, DMD, University of Kentucky, 1993
Durham, Roberta, Assistant Professor, BSN, Morehead State University, 2009
Elliott, Myra T, Professor, MSN, University of Kentucky, 1993
Fields, Carmen, Associate Professor, BS, Western Kentucky University, 2013
Fields, Michelle, Associate Professor, MA, Marshall University, 1995
Fitzpatrick, John J, Assistant Professor, BS, Morehead State University, 2013
Gambill, Jessica, Assistant Professor, MA, Union College, 2004
Gillis, Bill R, Professor, PhD, Florida State University, 1990
Hackney, Randal Clinton, Assistant Professor, MS, Morehead State University, 2007
Hall, Joshua, Assistant Professor, BA, Alice Lloyd College, 2004
Hall, Laura R, Associate Professor, MA, Morehead State University, 2004
Haney, Randell O, Professor, BS, Morehead State University, 2011
Harless, Irma Kay, Associate Professor, BSN, Morehead State University, 2013
Herald Koster, Jennifer, Lecturer, MA, Northern Kentucky University, 2012
Hicks, Jeffrey T, Professor, MA, Morehead State University, 2000
Howard, Jerry, Associate Professor, MA, Union College, 2006
Howell, Judy K, Professor/Librarian I, MA, University of Kentucky, 1992, MS, University of Kentucky, 1994
Jackson, Patsy R, Professor, DNP, University of Kentucky, 2008
Jacobs, Sabra P, Professor, MA, Bowling Green State University, 1989
Jennings, Kitty, Associate Professor, AME, Morehead State University, 2006
Keathley, Heath, Assistant Professor, AAS, Big Sandy Community & Technical College, 2013
Lawson, Dianna, Associate Professor, MSN, University of Kentucky, 1997
LeBrun, Terri E, Professor, MS, Morehead State University, 2009
Leedy, Jennifer L, Associate Professor, EdD, Morehead State University, 2013
Lewis, Lori Deanne, Professor, BS, Morehead State University, 2011
Little, Conda G, Professor, MA, Morehead State University, 2001
Lowe, Kathy, Associate Professor/Director of Library Services, MS, Florida State University, 2005
Madden, Darrell E, Associate Professor, MBA, University of Kentucky, 1980
McKenzie, Cynthia L, Professor, MBA, Morehead State University, 2001
Matijasic, Thomas D, Professor, PhD, Miami University, 1982
Maynard Jr, John L, Associate Professor, AAS, Big Sandy Community & Technical College, 2008
McClure, Jimmy, Associate Professor, BS, Morehead State University, 2011
McKenzie, Keithen Douglas, Professor, MS, Morehead State University, 2003
McKenzie, Marsha, Associate Professor, MA, Morehead State University, 2012
McKenzie, Vanessa Jean, Professor, MS, Morehead State University, 2005
Miller, Kathryn L, Professor, EdD, Morehead State University, 2015
Moore, Charles K, Associate Professor, AAS, Big Sandy Community & Technical College, 2007
Mullins, Rebecca Ann, Professor, MA, Morehead State University, 2003
Music, Lisa J, Professor, PhD, University of Louisville, 2013
Ousley, Tina Lee, Professor, MS, Morehead State University, 2003
Pack, Diana L, Professor, AME, Morehead State University, 2003
Pixley, Jane L, Associate Professor, MA, Radford University, 2004
Profitt, Alan David, Professor, DMin, Asbury Theological Seminary, 2014
Ramey, Charlotte, Associate Professor, BA, University of Kentucky, 1993
Ratliff, Teddie, Assistant Professor, MSN, Kaplan University, 2010
Ray, Pamela, Associate Professor, BS, Western Kentucky University, 2013
Rodenberg, Shawna, Lecturer, MFA, Bennington College, 2012
Roe, Richard T, r Lecturer, EdD, University of Kentucky, 2011
Saad, Sandra, Associate Professor, MA, University of Kentucky, 1987
Saad, Toufic A, Professor, MS, University of Kentucky, 1988
Skeens, Melissa B, Professor, BA, Morehead State University, 2010
Slone, Greta, Associate Professor, MA, Trinity College, 2003
Smith, Dwight P, Professor, MA, Bowling Green State University, 1979
Smith, Matthew, Associate Professor, MA, East Tennessee State University, 2009
Smith, Timothy, Associate Professor, MFA, University of North Carolina at Greensboro, 1993
Sofyan, Agus, Associate Professor, PhD, University of Kentucky, 2004
Stewardson, Forrest J, Professor, BS, Morehead State University, 1992
Sykes, Pamela J, Professor, MA, Morehead State University, 2002
Thacker, Joshua, Associate Professor, MA, Morehead State University, 2002
Thomas, Shirley L, Professor, PhD, University of Louisville, 1993
Thompson, Paul D, Professor, PhD, Oregon State University, 1991
Thompson, Paula B, Professor, MBE, Morehead State University, 1992
Turner, Garrison, Assistant Professor, MS, Ball State University, 2011
Valade, Judith E, Professor, MA, Texas A & M Corpus Christi, 2002
Vanhoose II, Charles W., Associate Professor, AAS, Big Sandy Community & Technical College, 2012
Vanhoose, David, Assistant Professor, AAS, Big Sandy Community & Technical College, 2008
Varney, Lesley Dean, Assistant Professor, BS, Eastern Kentucky University, 1980
Vierheller, Chenzhao, Professor, PhD, Ohio University, 1991
Vierheller, Thomas L, Professor, PhD, Ohio University, 1990
Wagner, Kathy A, Professor, MS, Kansas State University, 1974
Wallen, Mary Stepp, Professor, MA Indiana State University, 1997, Southern Illinois University-Carbondale, 2003
Watson, Fallon, Assistant Professor, PsyD, University of the Rockies, 2013
Watts, Randall L, Professor, MS, Eastern Kentucky University, 1991
Wells, Mark A, Professor, MA, Eastern Kentucky University, 1997

Bluegrass Community and Technical College

Mission Statement/Status of Accreditation

Bluegrass Community and Technical College (BCTC) transforms the Bluegrass Region - one student at a time, one employer at a time, one community at a time.

With students at the heart of our mission, BCTC supports access, success, and completion of educational goals through comprehensive and responsive programs and services at campuses across the region and through distance learning. With strong partnerships and excellence in teaching and learning, BCTC:

- Provides a skilled workforce, through high-quality career and technical programs, workforce training, and continuing education.
- Prepares students to transfer for baccalaureate degrees, through general education and literacy and life skills development.

BCTC promotes regional economic vitality and quality of life through diversity and inclusion, cultural and global awareness, critical thinking, civic responsibility, professional competence, and sustainability.

BCTC is a member college of the Kentucky Community and Technical College System and awards associate degrees, diplomas, and certificates.

Bluegrass Community and Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Bluegrass Community and Technical College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution's significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula

Associate in Arts
Associate in Science

Transfer Curricula/Art Related

An Associate in Fine Arts (AFA) degree is designed to transfer into a Baccalaureate of Fine Arts (BFA) program at a four-year institution. Individual Associate in Fine Arts (A) degree curricula in each group is noted by an A in parenthesis.

Digital Cinematic Arts (A)
Theatre (A)

Occupational/Technical Curricula

Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diplomas (D) and Associate in Applied Science (A) degree curricula in each group are noted by C, D and A in parenthesis.

Air Conditioning Technology (C, D, A)
Architectural Technology (A)
Automotive Technology (C, D, A)
Biotechnology Laboratory Technician (C, A)
Business Studies:
  Administrative Office Technology (C, D, A)
  Business Administration Systems (C, A)
  Medical Information Technology (C, D, A)
Civil Engineering Technology (A)
Computer Aided Drafting and Design (C, D, A)
Computer and Information Technologies (C, A)
Computerized Manufacturing and Machining (C, D, A)
Construction Technology (C, D, A)
Cosmetology (C, D)
Criminal Justice (C, A)
Dental Hygiene (A)
Education (A)
Emergency Medical Services – Paramedic (C)
Emergency Medical Technician (C)
Energy Technologies (C)
Engineering and Electronics Technology (C, D, A)
Environmental Science Technology (A)
Environmental Technology (C)
Equine Studies (C, D, A)
Emergency Medical Technician (C)
Filmmaking Script to Screen (C)
Fire/Rescue Science Technology (C, D, A)
General Occupational/Technical Studies (A)
Health Information Technology (C, A)
Human Services (C, A)
Information Management and Design (A)
Integrated Engineering Technology (C, A)
Interdisciplinary Early Childhood Education (C, D, A)
Manufacturing Industrial Technology:
  Electrical Technology (C, D, A)
  Industrial Maintenance Technology (C, D, A)
Medical Assisting (C, D, A)
Nuclear Medicine and Molecular Imaging Technology (A)
Nursing (A)
Pharmacy Technology (D)
Practical Nursing (C, D)
Radiography (A)
Real Estate (C)
Respiratory Care (C, A)
Security Management (C)
Surgical Technology (A)
Welding Technology (C, D, A)

Contact Information

Cooper Campus
470 Cooper Drive
Lexington, KY 40506-0235
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Leestown Campus
164 Opportunity Way
Lexington, KY 40511- 2623
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Newtown Campus
500 Newtown Pike
Lexington, KY 40508-1207
(859) 246-6200
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Danville Campus
59 Corporate Drive
Danville, KY 40422-9690
(859) 239-7030
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Lawrenceburg Campus
1500 Bypass North US 127
Lawrenceburg, KY 40342-9465
(502) 839-8488
bluegrass.kctcs.edu

Winchester-Clark County Campus
2020 Rolling Hills Lane
Winchester, KY 40391-6078
(859) 737-3098
bluegrass.kctcs.edu

Additional Sites

Newtown North Campus
Adult Education Building
690 Newtown Pike
Lexington, KY 40508-1207
(859) 246-6611
BCTCAdultEd.Fayette@kctcs.edu

Georgetown Advanced Manufacturing Center
PSC/NA-K
1001 Cherry Blossom Way
Georgetown, KY 40324
(502) 570-6357

North American Racing Academy
Thoroughbred Training Center
3380 Paris Pike
Lexington, KY 40511
(859) 293-0209

Phone Numbers

General Information	(859) 246-6200
Admission	1-855-246-BGRS (1-855- 246-2477)
Adult Education	(859) 246-6611
Student Billing	1-855-246-BGRS (1-855-246-2477)
Advising and Assessment	(859) 246-6220
Disability Support Services	(859) 246-6534
Financial Aid	1-855-246-BGRS (1-855-246-2477)
Human Resources	(859) 246-6643
Learning Resource Center	(859) 246-6380
Office of Communications	(859) 246-6507
Records and Registration	1-855-246-BGRS (1-855-246-2477)
Transfer Center	(859) 246-4620
Workforce Solutions	(859) 246-6666

Administration

President/CEO	Augusta A. Julian
Vice President, Academics and Workforce Development	Greg Feeney
Dean of Academics	Karen Mayo
Dean of Academics	Tammy Liles
Dean, Workforce Development	Pam Hatcher
Dean, Academic Support	Rebecca Simms
Vice President, Student Development and Enrollment Management	Palisa Williams-Rushin
Vice President, Information Technology Services	Ren Bates
Vice President Advancement and Organizational Development	Mark Manuel
Vice President, Finance and Operations	Lisa Bell
Vice President, Multiculturalism and Inclusion	Charlene Walker
Chief Officer, Public Information and Marketing	Mark Manuel
Chief Development Officer	Laurel Martin

Faculty

Adair, Gerald M, Associate Professor, MA, Florida Atlantic University, 2000
Akins, Marilyn, Associate Professor, PhD, Cornell University, 1993
Anderson, Melissa M, Professor, AS, Eastern Kentucky University, 2004
Anderson, Stephanie A, Associate Professor, BA, University of Kentucky, 1987
Bailey, Mary F, Associate Professor, AS, Eastern Kentucky University, 2003
Baker, Lucinda, Associate Professor, MA, Ohio University, 1997
Baker, Melinda, Instructor, DNP, University of Kentucky, 2013
Ball, Andrew Barrett, Associate Professor, MA, University of Kentucky, 1988
Barber, Antonio, Instructor, AAS, Central Kentucky Technical College, 2003
Barber, Cynthia E., Professor, MAT, University of Kentucky, 1984
Barton, Barbara, Instructor, M.S. Atlanta University, 1987
Beaulieu, Matthew, Instructor, MA, University of Kentucky, 2011
Bell, Mark, Instructor, M.S. University of Baltimore, 1994
BenBen, Alicia, BPS, Cazenovia College, 2011
Benton, Michael D, Associate Professor, MA, Bowling Green State University, 2000
Biega, Robert J, Associate Professor, MA, Eastern Kentucky University, 1998
Binzer, Michael A, Associate Professor, BS, University of Cincinnati, 1987
Birch, Timothy E, Associate Professor, MFA, University of Kentucky, 2012
Bishop, Ann K, Associate Professor, BA, Earlham College, 1967
Black, Ina Kaye, Associate Professor, MS, Eastern Kentucky University, 1997
Blaydes, Mary, Associate Professor, MS, University of Kentucky, 2002
Boes, Don, Associate Professor, MFA, Indiana University, 1985
Bradley, James W, Associate Professor, MS, University of South Carolina, 1999
Breeding, Sharon K, Professor, MA, Morehead State University, 1983
Bronner, Nancy, Associate Professor, MSN, University of Kentucky, 1979
Brown, Dana, Associate Professor, BS, Murray State University, 2002
Buckner, Terry, Professor, MSLS, University of Kentucky, 2001
Callan Jr, Paul C, Associate Professor, MS, Eastern Kentucky University, 1992
Camargo, Irene, Associate Professor, M.A., East Central Oklahoma University, 1993
Campbell, Lauren, Instructor, MBA, Eastern Kentucky University, May 2013
Carey, Sandra, Professor, PhD, Kent State University, 1979
Chandler, Robyn J, Associate Professor, MS, Eastern Kentucky University, 2008
Chirwa, Robert M, Associate Professor, MS, University of Kentucky, 1990
Clark, Jamie, Assistant Professor, BBA, Morehead State University, 2002
Coffey, Bobby J, Associate Professor, MS, Eastern Kentucky University, 2006
Collins, Amy, Instructor, MSN, McKendree University, 2015
Congleton, Yasemin K, Associate Professor, PhD, University of Kentucky, 2005
Cook, KaraLynn, Instructor, MS, BYU, 1996
Coulston, Charles Hamilton, Professor, MSEd, University of Kentucky, 1995
Craycraft, Kevin, Associate Professor, AAS, Central Kentucky Technical College, 2005
Cropper, Maureen Elizabeth Tobin,-Professor, MSIS, Louisiana State University, 2004
Davis, Robin M, Professor, MS, University of Kentucky, 1981
Davis, Timothy J, Associate Professor, MFA, University of Southern Mississippi, 1997
Davis, William, Professor, MA Ed Georgetown College, 1995
Disco-Boggs, Tamarra, Associate Professor, BS, University of Kentucky, 1981
Druggan, Judy, Assistant Professor, MS, University of Florida, 1982
Dunn, Kevin R, Professor, MS, Eastern Kentucky University, 2009
Durham, Jeffrey L, Associate Professor, BArch, University of Kentucky, 1992
Eldridge, Brent A, Professor, PhD, University of Kentucky, 2014
Elzey, Barbara, Professor, MA, University of Kentucky, 1997
Embry-Bailey, Nolen, Professor, MA, University of North Alabama, 1979
Fairchild, Virginia R, Professor, MBA, Eastern Kentucky University, 1993
Fannin, Laura, Instructor, MSN, Northern Kentucky University, 2014
Fenton, James P, Associate Professor, PhD, Columbia University, 1991
Fitch, Stephanie, Instructor, MA, Communication, Regent University, 2003
Floyd, Ninfa E, Associate Professor, MAEd, Morehead State University, 1990
Franklin, William, Assistant Professor, BS, University of Kentucky, 1992
Frisbie, Elizabeth C, Professor, PhD, Pennsylvania State University, 1987
Galvin, Sarah J, Professor, MA, Murray State University, 2005
Gannon, Shawn, Assistant Professor, AAS KCTCS, BCTC, 2010
Gasper, Sabrina Instructor, B.S. Indiana Wesleyan University, 2011
Gauthier, Karen, Assistant Professor, PhD, University of Kentucky, 2012
Gibbs, James William, Professor, MA, University of Kentucky, 1982
Gibson, Miranda, Assistant Professor, MSN, University of Cincinnati, 2013
Glasscock, Rebecca C, Professor, PhD, University of Kentucky, 2004
Greenlese, Susan, Associate Professor, MSN, University of Kentucky, 1989
Grigsby, Adam, Instructor, A.A.S. KCTCS, BCTC, 2008
Grigsby, Evelyn F, Associate Professor, BSN, Eastern Kentucky University, 1993

Gross, Claude R, Assistant Professor, MS, Eastern Kentucky University, 2009
Hackney, Sandra M, Associate Professor, AAS, Lexington Community College, 1996
Hagan, Kelly, Associate Professor, MA, Ball State University, 1992
Haggerty, Robin, Professor, MA, Indiana University of Pennsylvania, 1993
Halcomb, Don Anthony, Associate Professor, MS, University of Kentucky, 2005
Haley, Rebecca J, Professor, MA, Eastern Kentucky University, 2002
Hardin, Michael, Assistant Professor, BS, Eastern Kentucky University, 1993
Hardwick, Donald Gordon, Associate Professor, MBA, Xavier University, 1981
Hayes, Dixie, Instructor, BA, Midway College, 2008
Hayes, Susan, Associate Professor, MSN, Wichita State University, 1999
Healander, Beth J, Professor, MEd, University of Minnesota, 1996
Herrin, Jeffrey, Assistant Professor, MAT, Eastern Kentucky University, 2002
Hinkle, Robert R, Professor, MA, University of Kentucky, 2000
Hoekstra, Joshua M, Professor, MA, University of Colorado, 2003
Holderman, Staci, Associate Professor, MA, Eastern Kentucky University, 2004
Holt, Deborah Jones, Professor, MS, University of Kentucky, 1995
Hopper, Kevin R, Professor, PhD, University of Kentucky, 1998
Houghton, Lori, Professor, MA, Eastern Kentucky University, 1995
Howell, Gary, Instructor, BS, Liberty University, 2010
Huddleston, Angela, Associate Professor, MS, Eastern Kentucky University, 2011
Humble, Jeanne Sue, Associate Professor, MA, University of Kentucky, 1970
Hunt, Andrew Franklin, Associate Professor, MSEd, University of Kentucky, 2006
Ingle, Cynthia O, Associate Professor, PhD, University of Kentucky University, 2007
Jackson, Jean Caldwell, Professor, PhD, University of Sheffield, 1980
Jensen, Kevin, Assistant Professor, BA, Brigham Young University, 1987
Jent, Ashley, Instructor, AAS, Bluegrass Community and Technical College, 2010
Jett-Seals, Arion, Instructor, MA, University of Louisville,
Johnson, Steven I, Associate Professor, AAS, Central Kentucky Technical College, 2002
Johnson, Tanya R, Assistant Professor, BA, University of Kentucky, 1992
Jones, Jenny, Associate Professor, MBA, Eastern Kentucky University, 1996
Jones, Mary W, Associate Professor, MS, Eastern Kentucky University, 2013
Kalala, Nkongolo, Associate Professor, PhD, University of Kentucky, 1995
Kavanaugh, Susan C, Professor, MSEd, University of Kentucky, 1981
Kelly, Ryan S, Professor, MS, Florida State University, 1995
King, Angella M, Professor, MA, University of South Carolina, 2000
King, Richard N, Professor, MS, University of Kentucky, 1994
Klosterman, Lesley, Instructor, BS, The Ohio State University, 2003
Knight, Brandon, Associate Professor, MA, Texas Tech University, 1998
Knowles, Tracy Lyn, Professor, MS, University of Indiana, 1998
Kolasa, James Reid, Professor, MS, University of Kentucky, 1994
Lane Jr, Leon, Associate Professor, MA, University of Kentucky, 1993
Lanier, Rebecca A, Associate Professor, MSEd, University of Kentucky, 1992
Lefler, Patricia Sue, Professor, PhD, University of Indiana, 2004
Leon, Ana E, Professor, MS, Jacksonville State University, 1987
Leonard, Cecilia, Instructor, AS, Eastern Kentucky University, 1987
Lewis, Michelle, Instructor, BSN, Eastern Kentucky University, 2016
Liles, Tammy Jo, Professor, MS, University of Kentucky, 1994
Livingston, Daniel, Assistant Professor, Savannah College of Art and Design, 2016
Long, Jarvis, Instructor, BBA, Eastern Kentucky University, 1974
Lynch, Laura, Assistant Professor, MS, Eastern Kentucky University, 2006
Madison, Lynn H, Associate Professor, MA, Georgetown College, 1987
Magee, David A, Professor, MBA, University of Cincinnati, 1981
Matchuny, James K, Associate Professor, BS, University of Indiana, 1987
Matthews, Holly, Instructor, BSN, University of Kentucky, 1996
Mayer, Danny, Associate Professor, PhD, University of Kentucky, 2007
Mayo, Karen, Associate Professor, PhD, University of Kentucky, 2015
McCane, Rebecca, Associate Professor, MS, Morehead State University, 1988
Miller, Kausha C, Professor, MNS, Southeast Missouri State University, 2000
Miller, Patricia P, Professor, MAEd, University of Kentucky, 1994
Miriti, Landrea A, Professor, MA, Montclair State University, 1988
Motamedi, Hossein, Associate Professor, MA, University of Kentucky, 1986
Mullins, Larry McDowell, Associate Professor, MS, Eastern Kentucky University, 1973
Murphy, Donna LJ, Professor, MHE, Morehead State University, 1982
Murphy, William Kevin, Associate Professor, MBA, University of Kentucky, 1991
Otieno, Iddah Aoko, Professor, PhD, University of Kentucky, 2012
Papanicolaou, Thomas, Associate Professor, MS, University of Kentucky, 1994
Partin, Vicki D, Professor, MS, University of Kentucky, 1981
Pelfrey, DeAnna S, Associate Professor, MS, Eastern Kentucky University, 2005
Pelfrey, Holly Joyce, Associate Professor, MSEd, University of Kentucky, 1993
Perry Jr, Clovis C, Associate Professor, MA, Western Kentucky University, 1985
Pevley, Jennifer, Professor, MAEd, Eastern Kentucky University, 2007
Potter, William "Ralph", Associate Professor, BS, West Kentucky University, 2014
Puckett, Cheryl L, Associate Professor, MSN, Eastern Kentucky University, 2000
Ramsey, Tammy Jones, Associate Professor, MFA, Spaulding University, 2004
Reliford, LaVetta, Assistant Professor, MS, Midwestern University, 2001
Richardson, Kathleen E, Professor, MALIS, Rosary College, 1983
Rickert, Gregory W, Professor, MA, University of Kentucky, 1992
Rigney, Leif E, Associate Professor, MA, Eastern Kentucky University, 2001
Ripley, Michael Bret, Professor, MA, Eastern Kentucky University, 1990
Roberts, Danny D, Instructor, AAS, Central Kentucky Technical College, 2004
Robertson, Allan S, Associate Professor, MS, University of Louisville, 2008
Robertson, Mary Ellen, Instructor, MSN, Benedictine University, 2013
Roemmele, Lise I, Professor, MSN, State University of New York at Stony Brook, 1997
Rogers, Thomas Foster, Professor, M.A., University of Kentucky, 2007
Ross-Brown, Kimberly, Associate Professor, MA, University of Nebraska, 1996
Rouse, Mary Goza, Associate Professor, MS, Florida State University, 1979
Rutherford, Maria, Associate Professor, MA, Regent University, 2006
Saladin, Todd, Instructor, BS, University of Kentucky, 1993
Sallee, Melanie D, Associate Professor, BSN, University of Kentucky, 1991
Sauer, Sara, Instructor, BS, University of Kentucky, 2009
Saunier, Margaret E, Professor, PhD, University of Kentucky, 1987
Schuman, Daniel B, Professor, PhD, University of Kentucky, 2002
Scott Jr, John C, Associate Professor, MA, Eastern Kentucky University, 1990
Shear, Susan Knox, Assistant Professor, MHA, University of Kentucky, 1994
Shelton, Becky, Instructor, M.Ed., Indiana Wesleyan, 2004
Simms, Ruth A, Professor, MS, Eastern Kentucky University, 1995
Simpson, Zachary, Assistant Professor, BHSc, University of Kentucky, 2011
Sirimongkhon, Barbara, Assistant Professor, M.Ed., University of Arizona, 1987
Sloan, Perry, Instructor, AAS, Bluegrass Community and Technical College, 2003
Smoot, Richard C, Professor, PhD, University of Kentucky, 1988
Snyder, William D, Associate Professor, DMD, University of Kentucky, 1993
Spencer, Janella, Professor, MSEd, University of Kentucky, 1992
Steel, Brian, B.A. Instructor, University of Kentucky, 1990
Stone, Steven A, Associate Professor, MSIS, University of Illinois, Urbana-Champaign, 1991
Story, John E, Associate Professor, PsyD, Forest Institute of Professional Psychology, 1991
Strobel, Norman E, Professor, PhD, Cornell University, 1989
Sturgill, David, Assistant Professor, BS, University of Kentucky, 1995
Sullivan-Davis, Deborah, Associate Professor, PhD, University of Kentucky, 2003
Swango, Kathleen, Associate Professor, MA, Morehead State University, 1982
Thompson, Janie, Associate Professor, MSN, University of Kentucky, 1999
Todd, Adrienne H, Assistant Professor, MA, Eastern Kentucky University, 1997
Tucker, Cindy, Professor, MS, University of Kentucky 1999
Turner, Paul A, Professor, MS, University of Kentucky, 2008
Unruh, Timothy J, Associate Professor, BS, University of Louisville, 1996
Watts, Jean, Associate Professor, MEM, Duke University, 1987
Webb, Dixie, Assistant Professor, MSN, University of Kentucky, 1977
Webster-Little, Stacy, Professor, MA, University of Nebraska Lincoln, 1996
Welch, Mark A, Professor, BS, Eastern Kentucky University, 1991
Wheeler, Yules, Associate Professor, MA, Campbellsville College, 2008
White, Steven J, Professor, PhD, University of Illinois, 1990
White, Tanya, Associate Professor, MA, University of Kentucky, 1971
Whitescarver, Shirley Ann, Professor, PhD, University of Kentucky, 1987
Williams, Laura A, Associate Professor, MA, Eastern Kentucky University, 1997
Williams, Myra L, Associate Professor, MSN, University of Kentucky, 1991
Williamson, Melanie Gail, Professor, MS, University of Kentucky, 2005
Wilson, Vicki Kegley, Professor, MA, University of Kentucky, 1982
Wiseman, Jackie, Professor, MS, Eastern Kentucky University, 1988
Womack, Becky J, Professor, MA, University of Mississippi, 1975
Wyatt, Nelda K, Associate Professor, EdD, University of Kentucky, 1999
Zeps, Valdis J, Associate Professor, PhD, University of Washington, 1989

Elizabethtown Community and Technical College

Mission Statement/Status of Accreditation

Elizabethtown Community and Technical Collage (ECTC) is a comprehensive, open-access, public associate degree granting institution, responding to and serving the needs of our diverse communities. ECTC prepares people to live and work in a constantly changing world through dynamic teaching and learning environments.

Elizabethtown Community and Technical College is a member of the Kentucky Community and Technical College System.

Mission Accomplished by Providing:

- Associate in Arts and Associate in Science degree programs which provide students with the opportunity to complete the first two years of a baccalaureate degree.
- Associate in Applied Science degree, diploma and certificate programs as well as courses to prepare individuals to excel in a complex workforce.
- Continuing and life-long educations, short-term customized training for business and industry designed to strengthen the workforce and expand the life skills, knowledge, and the cultural enrichment of the community.
- Developmental Education courses to prepare individuals for success in transfer and technical courses.
- Associated services that support student development and success such as academic advising, library services, learning labs, assessment, career counseling, and cultural enrichment activities, among others.

Elizabethtown Community and Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Elizabethtown Community and Technical College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution's significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula

Associate in Arts
Associate in Science

Occupational/Technical Curricula

Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

Advanced Nursing Assistant (C)
African American Studies (C)
Air Conditioning Technology (C, D, A)
Apprenticeship Studies (A)
Automotive Technology (C, D, A)
Business Studies:
  Administrative Office Technology (C, D, A)
  Business Administration Systems (C, D, A)
  Medical Information Technology (C, D, A)
Computer Aided Drafting and Design (C, D, A)
Computer and Information Technologies (C, A)
Computerized Manufacturing and Machining (C, D, A)
Construction Technology (C, D, A)
Criminal Justice (C, A)
Culinary Arts (C, D, A)
Diesel Technology (C, D, A)
Education (A)
Emergency Medical Technician (C)
Engineering and Electronics Technology (C, D, A)
Fire/Rescue Science Technology (C, D, A)
General Occupational/Technical Studies (A)
Global Studies (C)
Human Services (C, A)
Interdisciplinary Early Childhood Education (C, D, A)
Manufacturing Industrial Technology:
  Electrical Technology (C, D, A)
  Industrial Maintenance Technology (C, D, A)
Nursing (A)
Plumbing Technology (C, D, A)
Practical Nursing (C,)
Radiography (A)
Real Estate (C)
Respiratory Care (C, A)
Welding Technology (C, D, A)

Contact Information

Elizabethtown Community and Technical College
600 College Street Road
Elizabethtown, KY 42701
(270) 769-2371
(877) 246-2322 (toll-free)
elizabethtown.kctcs.edu

Fort Knox Site
1174 Dixie Street
Fort Knox, KY 40121
(270) 706-8858

Springfield Campus
160 Corporate Drive
Springfield, KY 40069
(850 336-1361

Leitchfield Campus
101 East Carroll Gibson Boulevard
Leitchfield, KY 42754
(270) 259-1540

General Information

(270) 769-2371; (855)7GO-ECTC

Counseling, Advising & Transfer	(270) 706-8695
Disability Services	(270) 706-8455
Human Resources	(270) 706-8819
Library	(270) 706-8812
Public Relations	(270) 706-8530
Veterans Affairs	(270) 706-8815
Workforce Solutions	(270) 706-8700
Website	elizabethtown.kctcs.edu

Administration

President/CEO	Dr. Thelma J. White
Provost/Chief Academic Officer	Dr. Tiffany Evans
Chief Student Affairs Officer	Dr. Dale Buckles
Chief Operations Officer	Keith Johnson
Chief Business Affairs Officer	John White
Dean of Instructional and Professional Development	Sue French
Dean of Workforce Development and Continuing Education	Dr. Tom Davenport
Campus Director Springfield	Darrin Powell
Chief Institutional Advancement Officer	Ron Harrell
Human Resources Director	Kris Wood
Financial Aid Director	Michael Barlow
Public Relations Director	Mary Jo King
Cultural Diversity Director	Felicia Toliver
Information Technology Director	Chris Lee
Library Director	Ann Thompson
Learning Lab Director	Pam Harper
Institutional Effectiveness Coordinator	Sarah Edwards
Distance Learning	Gwyn Sutherland
Division of Occupational/Technical Programs	Michael Hazzard
Division of Fine Arts & Humanities	Jacqueline Hawkins
Division of Biological & Health Sciences	Tiffany McFalls-Smith
Division of Physical Sciences	Paul Sturgeon
Division of Social & Behavioral Sciences	Ramona Barrow

Faculty

Barrow, Ramona, Associate Professor, MS, Strayer University, 2004
Beauchamp, Cheryle, Assistant Professor, MBA, DeVry University, 2008
Biddle, Mary, Instructor, MSN, Walden University, 2012
Blanks, Rhonda, Associate Professor, MSN, University of Phoenix, 2010
Bow, Bobby K, Associate Professor, 21 years teaching experience, 22 years occupational experience
Bratcher, Tracy Renea, Professor, MA, Western Kentucky University, 1998
Brockman, Douglas W, Associate Professor, AAS/AAT, Elizabethtown Technical College, 2000
Brothers, Stephanie, Instructor, BS, University of Louisville, 2011
Brown, Charles J, Professor, MBA, University of Louisville, 1969
Brown, Margaret, Associate Professor, MA, Western Kentucky University, 2007
Brown, Shawn, Instructor, MS, Northern Kentucky University, 2014
Cameron, Sandra W., Professor, ME, University of Louisville, 2007
Cantrell, Douglas E, Professor, MA, University of Kentucky, 1985
Cantrell, Lisa A, Professor, MA, Morehead State University, 1986
Chandler-Cousins, Lois, Associate Professor, MEd, University of North Carolina, 1997
Chism, John, Associate Professor, AAS, Elizabethtown Community & Technical College, 2002
Pate, Fredericka Susie, Professor, AS, Sullivan University, 1995
Clemons, Jerry L, Professor, MS, Eastern Kentucky University, 2010
Cole, William, Associate Professor MS, Murray State University, 2001
Condiff, Sara E, Associate Professor, MAE, Western Kentucky University, 2007
Cooper, Yavaletta K, Assistant Professor, MS, Delta State University, 2012
Cordova, Timothy M, Professor, MA, Midwestern State University, 2002
Coulston, Charles, Assistant Professor, MS, University of Kentucky, 2006
Coy, Julie S, Professor, MAE, Western Kentucky University, 1998
Coyle, Michael B, Professor, MAT, Vanderbilt University, 1966
Csonka, Thomas Allen, Assistant Professor AAS, Elizabethtown Community and Technical College, 2013
Davis, John D, Associate Professor, PhD, University of Kentucky, 2003
Dile, Beverly, Professor, MA, West Virginia University, 1984
Dixon, Lucinda, Assistant Professor, DVM, Auburn University, 2010
Doty, Brent Morgan, Professor, MA, Western Kentucky University, 2003
Dryden, John, Assistant Professor, PhD, University of Louisville, 2013
Edwards, Sarah, Associate Professor, MS, Walden University, 2007
Eicher, Katrina M, Professor, MA, University of Nebraska, 1989
Embry, Robin D, Professor, MSN, University of Louisville, 1994
Erwin, Jill, Associate Professor, MA, University of Louisville, 2004
Faherty, Erin G, Instructor, MA, Northern Illinois University, 1992
Fox, Amy, Instructor, MFA, Spalding University, 2009
Gabehart, Stephen, Assistant Professor, AS, Western Kentucky University, 2008
Gabhart, Kimbra, Assistant Professor, MSN, McKendree University, 2008
Galloway, Joseph, Associate Professor, MS, Western Kentucky University, 2005
Glutting, Martha J, Professor, MSN, University of Louisville, 1989
Hamilton, Anna, Instructor, MA, St. Catharine College, 2014
Hankins, Tracy Kent, Instructor, MS, University of Maryland, 2013
Haque, Khondaker E, Professor, MA, University of Pittsburgh, 1981
Harper, Pamela, Professor, MA, SCT, Murray State University, 1980
Harris, Robert L, Professor, MA, Western Kentucky University, 1975
Hart, Judy A, Associate Professor, MEd, University of Louisville, 1991
Hawkins, Jacqueline, Associate Professor, MA, Florida State University, 2006
Hazzard, Michael W, Professor, BS, Western Kentucky University, 2007
Henderson, JoNell, Assistant Professor, MBA, Amberton University, 1989
Hendricks, Arthur A, Professor, AAS, Elizabethtown Technical College, 2001
Hicks, MeLeah Dyer, Professor, MA, Western Kentucky University, 1994
Higdon, Rebecca, Associate Professor, MS, University of Louisville, 2011
Holman, Richard, Associate Professor, MBA, Georgia State University, 1976
Hornback, Mary C, Professor, MA, Western Kentucky University, 1989
Howard, Linda G, Professor, MAE, Western Kentucky University, 1980
Johnson, Cyril, Associate Professor, BS, Western Kentucky University, 2006
Joyce, W D, Instructor, AAS, Elizabethtown Community and Technical College, 2006
Kelley, Lawrence, Associate Professor, MA, University of Memphis, 2006
Kellie, Shawn A, Professor, PhD, University of Louisville, 2005
Kennedy, Kevin, Professor, MA, Indiana University, 1996
Kroll, Daniel, Associate Professor, AAS, Elizabethtown Community & Technical College, 2008
Likins, Stephen S, Assistant Professor, AS, Western Kentucky University, 1999
Lilygren, Deena, Associate Professor, MA, University of Louisville, 2009
Lloyd, Daniel Montgomery, Associate Professor, MS, Eastern Illinois University, 1998
Logsdon, Charles G, Professor, MA, University of Louisville, 1999
Lowe, Robert Alan, Professor, AAS, Elizabethtown Technical College, 2010
Mackellar, Laurie A, Associate Professor/Librarian II, MLS, University of Kentucky, 1992
Madras, Navin, Associate Professor, MS, Marquette University, 2001
Mayhew, Linda N, Professor, EdD, University of Kentucky, 1992
McFalls-Smith, Tiffany, Associate Professor, MS, Southeastern Louisiana University, 2004
Meredith, Rosemary L, Associate Professor, BS, University of Louisville, 1995
Metzger, Revel L, Professor, MA, Western Kentucky University, 1999
Meyer, Callista, Associate Professor/ Librarian II, MLS, University of Kentucky, 2007
Mihalco, Michael, Instructor, MS, University of Maine, 2007
Moreno, Alberto Jose, Associate Professor, MA, University of Louisville, 2001
Mudd, Susan G, Professor, MSN, Spalding University, 1990
Murley, James I, Professor, PhD, University of Louisville, 2012
Nail, Joe J, Professor, BS, University of Louisville, 2000
Nason, Dean W, Associate Professor, MA, Western Kentucky University, 1979
Nemes, Janice E, Professor, MAT, University of Louisville, 1983
Nusbaumer, David D, Associate Professor, MA, University of Montana, 1992
Ottman, Darla Kaye, Instructor, MS, Western Kentucky University, 1991
Owens, Johnny, Professor, MA, Western Kentucky University, 1986
Owsley, Wanda D, Professor, PhD, University of Louisville, 2009
Page, Martha, Associate Professor, MS, Vanderbilt University, 1979
Parrett, Kevin, Assistant Professor, MS, Sullivan University, 2005
Pate, Lloyd, Assistant Professor, AAS, Elizabethtown Technical College, 2003
Poteat, Wanda E, Professor, MA, Western Kentucky University, 1979
Poteet, Gordon D, Associate Professor, AS, Western Kentucky University, 1997
Raizor, Glenn, Associate Professor, AAS, Elizabethtown Community & Technical College, 2005
Ray, Rachel, Associate Professor, MA, Indiana University, 2005
Reed, Joseph, Instructor, AAS, Elizabethtown Community & Technical College, 2008
Richard, Amanda, Assistant Professor, MS, Texas A & M University, 2011
Rigney, Mary Alisa, Associate Professor, MA, Western Kentucky University, 2001
Rivera, Jeffrey, Associate Instructor, AAS, Elizabethtown Community & Technical College 2005
Roberts, Phillip, Assistant Professor, MBA, University of Phoenix, 2011
Schork, James E, Professor, EdD, Northern Illinois University, 1994
Shank, Kevin, Assistant Professor, MA, University of Louisville, 2008
Slone, Anthony, Associate Professor, MBA, Ashland University, 2001
Spalding, Jared C, Professor, BS, Western Kentucky University, 2002
Spratt, Sharon L, Professor, MA, Western Kentucky University, 1989
Stearns, Gary M, Professor, PhD, University of Kentucky, 1990
Sturgeon, Paul D, Professor, BS, University of Louisville, 1993

Sutherland, Marty L, Professor, BS, Southern Illinois University, 1996
Tabor, Sara, Instructor, AOS, Le Cordon Blue, 2007
Thomas, Dora Kay, Professor, MSN, Western Kentucky University, 2005
Thompson, Ann B, Professor/Librarian I, MLS, Indiana University, 1975
Towell, Elizabeth G, Professor, MA, University of Kentucky, 1995
Vail, James A, Professor, MS, University of Kentucky, 1978
Valora, Joseph Lee, Assistant Professor, AAS, Elizabethtown Community and Technical College, 2013
Waldron, John, Instructor, Ph.D, Texas A & M University, 2002
Walston, Patricia, Associate Professor, MA, University of Louisville, 2000
Wicks, Edward, Assistant Professor, MS, Syracuse University, 2001
Wiles, Matthew W, Assistant Professor, PhD, University of Louisville, 2014
Williams, Barry A, Instructor, MA, Austin Peay State University, 2010
Williams, Richard D, Associate Professor, MA, Western Kentucky University, 1978
Wolf, Joe, Associate Professor, PhD, University of Kentucky, 1992
Wolfe, Martha T, Professor, MS, University of Kentucky, 1978
Woodson, Robert, Associate Professor, AAS, Elizabethtown Community & Technical College, 2004
Wright, Miky, Instructor, MS, Western Kentucky University, 2015
Yates, Jennifer, Assistant Professor, MS, Western Kentucky University, 2012
Yates, Rita Jo, Professor, MSSW, University of Louisville, 1995
Young, Cody, Associate Professor, AAS, Bluegrass Community & Technical College, 2004
Zulevich, Louis, Associate Professor, MS, University of Louisville, 2002

Gateway Community and Technical College

Mission Statement/Status of Accreditation

Gateway Community and Technical College provides high quality, affordable, accessible, and inclusive postsecondary education and training resulting in a positive contribution to the economic vitality of the region and enhanced quality of life for all citizens.

Gateway Community and Technical College is a member of the Kentucky Community and Technical College Systems and is a public two-year degree granting institution serving the Northern Kentucky Region.

Gateway Community and Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Gateway Community and Technical College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution's significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula

Associate in Arts
Associate in Science

Occupational/Technical Curricula

Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

Advanced Manufacturing (C)
Air Conditioning Technology (C, D)
Apprenticeship Studies (A)
Auto Body/Collision Repair Technology (C, D)
Automotive Technology (C, D)
Business Foundations (C)
Business Studies:
- Business Administration Systems (C, D, A)
- Supply Chain Management (C, A)

Computer and Information Technologies (C, A)
Computerized Manufacturing and Machining (C, D)
Cosmetology (C, D)
Criminal Justice (C, A)
Diesel Technology (C, D)
Education (A)
Emergency Medical Services – Paramedic (C, A)
Emergency Medical Technician (C)
Energy Technologies (C, A)
Fire/Rescue Science Technology (C, D, A)
General Occupational/Technical Studies (A)
Health Information Technology (C, A)
Human Services (C, A)
Interdisciplinary Early Childhood Education (C, D, A)
Kentucky Medication Aide (C)
Manufacturing Engineering Technology (C, A)
Manufacturing Industrial Technology:
- Electrical Technology (C, D, A)
- Industrial Maintenance Technology (C, D, A)

Massage Technology (C, A)
Medicaid Nurse Aide (C)
Medical Assisting (C, A)
Nursing (A)
Plumbing Technology (C)
Practical Nursing (D)
Truck Driver Training (C)
Welding Technology (C, D)

Contact Information

Gateway Community and Technical College
Main numbers: (859) 441-4500
1-(855) 3GO-GCTC [1-(855) 346-4282]
gateway.kctcs.edu

Boone Campus
500 Technology Way
Florence, KY 41042

Edgewood Campus
790 Thomas More Parkway
Edgewood, KY 41017

Urban Metro Campus
525 Scott Boulevard
Covington, KY 41011

General Information

Admissions	1-855-3GO-GCTC (1-855-346-4282)
Adult Education	(859) 442-1186
Advising Center	(859) 442-1630
Assessment Center	(859) 442-1159
Business Office	1-855-3GO-GCTC (1-855-346-4282)
Communications	(859) 442-1172
Disability Services	(859) 442-4120
Financial Aid	1-855-3GO-GCTC (1-855-346-4282)
Human Resources	(859) 442-1150
Library and Information Services	(859) 442-4162
Registrar	(859) 442-4176
Safety and Security	(859) 442-4129
Transfer	(859) 815-7642
Urban Center	(859) 442-1601
Veterans Affairs	(859) 442-4114
Workforce Solutions	(859) 442-1170
Website	gateway.kctcs.edu
Facebook	facebook.com/GatewayCTC

Administration

President	Dr. Fernando Figueroa
Executive Assistant to the President	Sharon Poore
Vice President, Academic Affairs	Dr. Teri VonHandorf
Executive Vice President, Strategic Initiatives	Dr. Patricia Mahabir
Vice President, Administrative and Business Affairs	Jamie Younger
Vice President, Corporate College	Carissa Schutzman
Vice President, Development and Strategic Partnerships	Dr. Amber Decker
Vice President, Student Development	Ingrid Washington
Associate Vice President, Academic Services	Doug Penix
Associate Vice President, Corporate College	Jerrod Young
Associate Vice President, Knowledge Management	Jeremy Berberich
Associate Vice President, Student Development	Mallis Graves
Dean, Arts and Sciences	Dr. Susan Santos
Dean, Business, Information Technology and Professional Studies	Dr. Amy Carrino
Dean, Enrollment Services	Andre Washington
Dean, Health Professions	Amber Carter
Dean, Manufacturing and Engineering	Dee Wright
Dean, Transportation Technologies	Sam Collier
Acting Registrar	Andre Washington
Regional Director of Adult Education/ COMPASS Coordinator	Peg Russell
Director, Communications	Michelle Sjogren
Director, Counseling Services	Tiffany Minard
Interim Director, Disability Services	Dana Franxsman
Director, Early College Initiatives	Shelby Krentz
Director, Financial Aid	Zana Smith
Director, Fiscal Services	Jennifer Noble
Director, Grants and Special Projects	Sandy Ortman-Tomlin
Director, Human Resources	Phyllis Yeager
Director, Information Services	Melissa Sears
Director, Knowledge Management	Steve Popple
Director, Library and Information Services	Denise Fritsch
Director, Maintenance and Operations	George Hall
Director, North Central Area Health Education Center	Rose Mueller
Director, Nursing	Melani Stallkamp
Director, Retention Services	Ann Schultz
Director, Safety and Security	Tim Chesser
Director, Student Support Services	Colleen Kane
Director, Teaching and Learning	Dr. Kerri McKenna

Faculty

Albert, Stephanie Winter, Associate Professor, MEd, Northern Kentucky University, 1993
Bethel, Carol L, Professor, MBA, Xavier University, 1989
Bloemer, Dawn, Instructor, MPH, Walden University, 2009
Bloom, Antoinette, Assistant Professor, Diploma, Gateway Community and Technical College, 2015
Blum-Pretty, Sherry, Assistant Professor, MA, Northern Kentucky University, 2010
Bowen, Richard, Professor, AAB, Cincinnati State Technical and Community College, 1976
Brierley, Christina, Assistant Professor, MSN, Northern Kentucky University, 2016
Burch, Courtney, Associate Professor, MA, Northern Arizona University, 2009
Camm, Jana, Associate Professor, MEd, Northern Kentucky University, 1981
Carrino, Amy, Associate Professor, JD, Salmon P Chase College of Law, 1988
Carroll, John, Instructor, JD, Salmon P Chase College of Law, 2000
Carter, Amber, Associate Professor, BS, Eastern Kentucky University, 2009
Cathcart, John, Assistant Professor, MS, Texas A&M University, 2010
Chaney, Susan, Associate Professor, MEd, Northern Kentucky University, 1980
Chastain, Brendon, Assistant Professor, PhD, University of Arkansas, 2010
Collier, Samuel E, Associate Professor, BA, Northern Kentucky University, 2013
Collins, Thomas W, Professor, BS, University of Cincinnati, 1977
Crawford, Charles, Instructor, 2 Years Teaching Experience, 11 Years Occupational Experience, ASE Master Certification
Czirr, Karen, Instructor, MS, St. Joseph University, 1993
Da Silva, Fares, Associate Professor, MA, Indiana State University, 2008
DeBerry, John, Associate Professor, MA, University of Wyoming, 2003
Deeley Wilhite, Holly Michelle, Professor, PhD, University of Louisville, 2003
Donahue, William, Instructor, AAS, Bluegrass Community and Technical College, 2012
Donohoo, Kevin H, Associate Professor, AS, University of the State of New York, 1982
Down, Sharon, Assistant Professor, MA, University of Virginia, 1993
Ervin, Justin, Associate Professor, PhD, Northern Arizona University, 2011
Frazier, Paul, Assistant Professor, PhD, University at Albany SUNY, 2001
Fritsch, Denise, Instructor/Librarian IV, MS, University of Kentucky, 2007
Fritz, Diane, Associate Professor, MS, Medical University of Ohio, 1997
Gallagher, Richard, Instructor, BA, Thomas More College, 2014
Gayle, Veronica, Instructor, BS, Eastern Kentucky University, 1971
Grooms, Chad M, Assistant Professor, MBA, Morehead State University, 1998
Harris, Vernon R, Associate Professor, BS, Northern Kentucky University, 2000
Haysbert, Ronald, Assistant Professor, BTM, DeVry University, 2009
Honu, Yohanes, Professor, PhD, Southern Illinois University, 2004
Jing, Weizhong, Associate Professor, MS, New Jersey Institute of Technology, 1998
Jones, Kenneth, Assistant Professor, 11 Years Teaching Experience, 12 Years Occupational Experience, ASE Master Certification
Kane, Colleen N, Associate Professor, MEd, University of North Florida, 1980
Karlage, Martha, Instructor, BS, Eastern Kentucky University, 1986
Law, Chelsea, Instructor, MS, Clemson University, 2012
Laws, Sarah, Instructor, AAS, Gateway Community and Technical College, 2008
Lybrook, Adam C, Instructor, Diploma, Hibbing Community College, 2000
Mahan, Jerrell L, Assistant Professor, AAS, Northern Kentucky University, 1991
Mason, Meredith, Instructor, MSW, University of Michigan, 2011, MS, University of Cincinnati, 2015
Mathew, George, Professor, PhD, University of Kentucky, 1994
McKenna, Kerri, Associate Professor, EdD, Northern Kentucky University, 2011
Myka, Jennifer, Assistant Professor, PhD, University of Kentucky, 2003
Neeley, Ron, Assistant Professor, BS, Northern Kentucky University, 2010
Neelly, Rocky, Associate Professor, MA, University of Cincinnati, 2008
Nelson, Lance, Associate Professor, BA, Marshall University, 1987
Ostendorf, Audrey, Instructor, MA, Northern Kentucky University, 2014
Owsley, Adarrell, Instructor, MEd, Indiana Wesleyan University, 2012
Phillips, Marcha, Assistant Professor, MSN, Indiana Wesleyan University, 2004
Popple, Elizabeth, Assistant Professor, BA, College of Mount St. Joseph, 1993
Praiswater, Angela, Instructor, MBA, Xavier University, 2009
Ramanayake, Deepanishanthara, Associate Professor, MS, Morehead State University, 2008
Reynolds, Jon, Instructor, BA, Centre College, 1995
Rice, Barbara, Assistant Professor, MBA, West Virginia University, 1997
Rickels, Christopher, Instructor, MA, The University of Toledo, 2013
Rickert, Patrick E., Associate Professor, MS, University of Wisconsin, 2000
Riley, Michael P, Instructor, MBA, Morehead State University, 2005
Riley, Michael K, Instructor, AAS, Morehead State University, 1983
Rosenberg, Lisa, Instructor, BA, York College of Pennsylvania, 1988
Ross, Deborah, Assistant Professor, MEd, Xavier University, 1987
Russell, Margaret, Instructor, MEd, Xavier University, 1990
Santos, Susan, Associate Professor, PhD, Walden University, 2004
Schaefer, David, Instructor, MA, Northern Kentucky University, 2013
Schilling, Judith C, Assistant Professor, MEd, Northern Kentucky University, 1987
Schultz, Kimberly, Instructor, Certificate, Gateway Community and Technical College, 2011
Selzer, Thomas J. Instructor, Diploma, Pinellas Vocational Technical Institute, 1986
Settlemoir, Beth, Associate Professor, ME, University of Cincinnati, 2008
Siekman-Hall, Stacey L., Assistant Professor, MS, University of Cincinnati, 2008
Smith, Jeffery, Instructor, Certificate, Sinclair Community College, 2003
Smith, Sarah, Instructor, MA, College of Mount St. Joseph, 2008
Stallkamp, Melani, Associate Professor, MSN, University of Cincinnati, 2009
Stewart, Gregory, Associate Professor, PhD, Ohio University, 1993
Stroud, Reva, Instructor, BS, Northern Kentucky University, 2010
Texter, Mary, Assistant Professor, MA, Northern Kentucky University, 2006
Vallette, Natasha, Assistant Professor, MA, Bowling Green State University, 2012
Walter, Eileen, Instructor, MA, University of Cincinnati, 1998
Warburton, Charles, Associate Professor, MA, University of Cincinnati, 2006
Wright, Dee, Associate Professor, 15 Years Teaching Experience, 26 Years Occupational Experience

Hazard Community and Technical College

Mission Statement/Status of Accreditation

Hazard Community and Technical College HCTC is a comprehensive, public community and technical college that empowers diverse learners, building self-confidence and leadership capacity for lifelong personal success and community enhancement.

A member of the Kentucky Community and Technical College System, HCTC primarily serves eastern Kentucky as a collaborative catalyst for blending Appalachian traditions with diverse global innovations.

Hazard Community and Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Hazard Community and Technical College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution's significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula

Associate in Arts
Associate in Science

Transfer Curricula/Art Related

An Associate in Fine Arts (AFA) degree is designed to transfer into a Baccalaureate of Fine Arts (BFA) program at a four-year institution. Individual Associate in Fine Arts (A) degree curricula in each group is noted by an A in parenthesis.

Visual Art (A)

Occupational/Technical Curricula

Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

Agricultural Technology (C)
Air Conditioning Technology (C, D)
Auto Body/Collision Repair Technology (C, D)
Automotive Technology (C, D, A)
Business Communications (C)
Business Studies:
  Business Administration Systems (C, D, A)
  Medical Information Technology (C, D, A)
Computer Aided Drafting and Design (C, D)
Computer and Information Technologies (C, A)
Construction Technology (C)
Cosmetology (C, D)
Criminal Justice (C, A)
Diagnostic Medical Sonography (A)
Diesel Technology (C, D)
Emergency Medical Services – Paramedic (C, A)
General Occupational/Technical Studies (A)
Health Information Technology (C, A)
Heavy Equipment Operation (C, D)
Human Services (C, A)
Interdisciplinary Early Childhood Education (C, D, A)
Manufacturing Industrial Technology:
  Electrical Technology (C, D)
Medicaid Nurse Aide (C)
Medical Laboratory Technology (C)
Nursing (A)
Physical Therapist Assistant (A)
Practical Nursing (D)
Professional Studio Artist (C, D, A)
Radiography (C, A)
Surgical Technology (A)
Surveying & Mapping Technology (C)
Visual Communication:
  Multimedia (C, A)
Welding Technology (C, D)

Contact Information

Hazard Community & Technical College
One Community College Drive
Hazard, KY 41701
(800) 246-7521
hazard.kctcs.edu

Hazard Campus
One Community College Dr.
Hazard, KY 41701
Technical Campus
101 Vo Tech Dr.
Hazard, KY 41701

Lees College Campus
601 Jefferson Ave.
Jackson, KY 41339

Knott County Branch
238 HWY 160 (Physical)
PO Box 1498 (Mailing)
Hindman, KY 41822

Leslie County Center
108 Maple Ave. (Physical)
PO Box 1870 (Mailing)
Hyden, KY 41749

General Information

Academics	(606) 487-3502
Admissions	(606) 487-3153
Business Office	1-855-6GO-HCTC (1-855-646-4282)
Disability Services	(606) 487-3486
Financial Aid	1-855 6GO-HCTC (1-855-646-4282)
Human Resources	(606) 487-3111
Library	(606) 487-3304
Marketing/Public Relations	(606) 487-3141
Records	(606) 487-3311
Transfer Information	(606) 487-3077
Veterans Affairs	(606) 487-3059
Workforce Solutions	(606) 487-3287
Website	hazard.kctcs.edu

Administration

President/CEO	Dr. Jennifer Lindon
Assistant to the President	Delcie Combs
Provost/Vice President of Academics Services and Student Services	Germaine Shaffer
Chief Business Services Officer	Connie Watts
Chief Information Officer	Donna Roark
Senior Director of Human Resources	Vickie Combs
Director of Public Relations	Evelyn Wood
Dean of Business Services	Jackie Hall
Dean of Computer and Online Technologies	Dr. Ella Strong
Dean of Allied Health Science Technologies	Anna Napier
Dean of General Education	Leila Sandlin Smith
Dean of Occupational Technologies	Tony Back
Dean of Retention Services	Dr. Beth Pennington

Faculty

Adams, Douglas D, Professor, AAS, Hazard Technical College, 2002
Adams, Mary D, Professor, AM, Morehead State University, 1979
Back, Renee Tabor, Professor, MS, University of Kentucky, 1993
Back, Tony, Professor, MS, Eastern Kentucky University, 2012
Barnes Jr, Donald R, Professor, MS, Oklahoma State University, 1992
Bates, Lauren Ann, Associate Professor, MSN, Eastern Kentucky University, 2009
Begley, Dan H, Professor, MBA, University of Kentucky, 1998
Boothe, Jenna L, Associate Professor, DNP, Western Kentucky University, 2015
Bowling, Randy L, Assistant Professor, 45 year Teaching Experience, 27 years Occupational Experience
Bowling, Tracy L, Professor, DPT, University of Kentucky, 2010
Branson, Cathy A, Librarian II, MSLS, University of Kentucky, 2005
Brunty, Helen F, Professor, MSW, University of Kentucky, 2000
Bryant, Jeremiah, Professor, MA, Morehead State University, 2000
Bryant, Randall K, Professor, MA, West Georgia College, 1988
Caldwell, Venita Carol, Professor, MA, Union College, 1980
Campbell, Jesse A, Associate Professor, BS, Eastern Kentucky University, 1975
Caudill, Jimmy D, Professor, Diploma, Hazard Technical College, 1987
Clemons, Mavis, MS, Eastern Kentucky University, 2010
Collins, Gwendolyn, Professor, MSN, University of Kentucky, 1982
Combs, Donna R, Professor, MSN, University of Kentucky, 1986
Combs, Jerry M, Professor, MA, Morehead State University, 2011
Cornett, Willie, Assistant Professor, AAS, Hazard Community and Technical College, 2009
Couch, Melissa, BS, Morehead State University, 2012
Cravens, Thomas L, Assistant Professor, MS, University of Kentucky, 1989
Currie, Paul B, Associate Professor, DVM, University of Georgia, 2000
Davidson, Gwendolyn, Instructor, MS, Morehead State University, 2014
Davis, Tammy A, Instructor, AAS, Somerset Community College, 2013
Davison, Patrick S, Librarian II, MSLS, University of Kentucky, 1990
Dixon, James M, Associate Professor, MA, Northern Arizona University, 1983
Dunn, Timothy J, Professor, MA, University of Kentucky, 1989
Flannery, Madeline K, Professor, MA, Columbia University, 1986
Flynn, Michael, , MFA, University of Montana, 2012
Francis, Sam W, Associate Professor, PhD, University of Kentucky, 1998
Frazier, David L, Professor, MBA, Morehead State University, 1998
Frazier, Misty, MSW, University of Kentucky, 2011
Gainer, Victor, Assistant Professor, 12 years Occupational Experience
Gibson, Diane A., Assistant Professor, MS, Louisiana Tech University, 2009
Globig, Sabine A, Professor, MS, Rutgers University, 1988
Gray, Michael, Instructor, MFA, Florida Atlantic University, 2012
Hagans-Shepherd, Ludrenia Sue, Professor, MSN, Eastern Kentucky University, 2000
Herald, Patricia Ann, Professor, DSN, University of Alabama, 1993
Holl, Richard E, Professor, PhD, University of Kentucky, 1996
Howard, Arzella W, Associate Professor, MSN, University of Phoenix, 2008
Howard, Cluster C, Professor, MA, Morehead State University, 1983
Ingram, Danny M, Professor, BS, Eastern Kentucky University, 2008
Jarvis, Shalena, Assistant Professor, AAS, Pitt Community College, 2006
Johnson, R Susan, Professor, BS, Eastern Kentucky University, 2007
Kidd Jr, Ralph E, Professor, MS, Eastern Kentucky University, 1991
Lewis, Everett C., Assistant Professor, 25 years Occupational Experience
Lindon, Jennifer A, Professor, PhD, Mississippi State University, 2010
Lucero, Scott C, Professor, MA, University of Kentucky, 1992
Lutes, Jennifer, Instructor, MA, Morehead State University, 2010
Madden, James Daniel, Assistant Professor, MA, University of the Cumberlands, 2010
Maggard, Wilma, Assistant Professor, Certificate, Hazard Community and Technical College, 2003
Malepeai, Alexis, Assistant Professor, BA, Brown University, 2003
Martin, Christina R, Associate Professor, MSN, Eastern Kentucky University, 2009
Martin, Joanna H, Associate Professor, Diploma, Cumberland Valley Technical College, 1999
Mathes II, John P, Associate Professor, MA, East Tennessee State University, 2006
May, Scott R, Professor, MS, Indiana State University, 1990
Medlin, Rex, Lecturer, MS, Arkansas State University, 2007
Mobelini, Deronda C, Professor, Ed. D., University of Kentucky, 2012
Moon, Randall B, Professor, PhD, University of California at Riverside, 2000
Mullins, Denessa, Instructor, BA, Ashford University, 2010
Napier, Anna S, Professor, MSW, University of Denver, 1991
Napier, Samuel Scott, Instructor, 18 years Teaching Experience, 18 years Occupational Experience
Neace, Thomas D, Professor, MA, Eastern Kentucky University, 1996
Osborne, Norman Dean, Instructor, 32 years Teaching Experience, 28 years Occupational Experience
Pennington, Beth Ann, Associate Professor, Ed. D., Morehead State University, 2013
Pergram, Nakisha, MA, Morehead State University, 2006
Petrey-Blandau, Sandra E, Professor, MA, Eastern Kentucky University, 1982
Phipps, Sandra K, Professor, MA, Morehead State University, 1988
Reed, Ronald S, Professor, MA, University of Dayton, 1985
Richie, Tammy Lene, Professor, MBA, Morehead State University, 1985
Rogers, Hannah, Librarian IV, MA, University of Kentucky, 2009
Sasser, Lynn D, Professor, MS, Eastern Kentucky University, 1972
Shaffer, Germaine B, Professor, JD, University of Louisville, 1990
Sexton, Rachel Juanita, Associate Professor, Diploma, East Kentucky Beauty College, 1998
Sipple, Savannah, Assistant Professor, MFA, Spalding University, 2008
Smith, Leila Sandlin, Professor, MBE, Morehead State University, 1987
Smith, Walter, I Assistant Professor, MS, University of Cincinnati, 2007
Spencer-Barnes, Amanda G, Associate Professor, MA, Morehead State University, 2007
Stamper, Vera Dawn, Associate Professor, DPT, University of Kentucky, 2011
Strickland, William M, Professor, MA, Morehead State University, 1981
Strong, Ella J, Professor, Ed. D., University of Kentucky, 2011
Swafford, Bryan, Assistant Professor, BA, Alice Lloyd College, 2000
Terry, Homer, Professor, MS, Eastern Kentucky University, 2004
Turner, Chestina, Assistant Professor, MA, Eastern Kentucky University, 2008
Vance, Delores S, Professor, MBE, Morehead State University, 1995
Vergne, Stephanie L, Professor, MA, Morehead State University, 2001
Watts, Natasha, Instructor, MS, Eastern Kentucky University, 2012
Wernette, Amy S, Professor, MS, University of Michigan, 1996
Whittaker, Timothy, Professor, BS, Midwestern State University, 2005
Williams, Jenny D, Professor, MA, University of Kentucky, 1992
Wood, Jeremy R, Professor, MS, University of Tennessee, 1993

Henderson Community College

Mission Statement/Status of Accreditation

The Mission of Henderson Community College: To enhance the quality of life and employability of the citizens of our community by serving as the primary provider of:

- College and Workforce Readiness
- Transfer Education
- Technical Education and Training
- Lifelong Learning and Cultural Enrichment

Henderson Community College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Henderson Community College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution's significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula

Associate in Arts
Associate in Science

Occupational/Technical Curricula

Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

Agricultural Technology (C, D, A)
Business Studies:
  Business Administration Systems (C, D, A)
Business Management and Marketing (C)
Computer and Information Technologies (C, A)
Computerized Manufacturing and Machining (C)
Dental Assisting/Dental Hygiene (A)
Emergency Medical Technician (C)
Engineering and Electronics Technology (C)
Interdisciplinary Early Childhood Education (C, D, A)
Manufacturing Industrial Technology:
  Electrical Technology (C)
  Industrial Maintenance Technology (C, A)
Medical Assisting (C, D, A)
Medical Laboratory Technology (C, A)
Nursing (A)
Practical Nursing (C)
Welding Technology (C)

Contact Information

Henderson Community College
2660 South Green Street
Henderson KY 42420
(270) 827-1867
Toll free: 800-696-9958
Henderson.kctcs.edu

General Information

Welcome Center	(270) 827-1867 or (800) 696-9958
Admissions	1- 855-GO-HCC44 (855-464-2244)
Advising	(270) 831-9610
Assessment Center	(270) 831-9772
Business Office	1-855-GO-HCC44 (855-464-2244)
Continuing Education	(270) 831-9658
Disability Services	(270) 831-9783
Financial Aid	1-855-GO-HCC44 (855-464-2244)
Human Resources	(270) 831-9617
Library	(270) 831-9760
Orientation	(270) 831-9607
Public Relations	(270) 831-9805
Records	1- 855-GO-HCC44 (855-464-2244)
Technology Solutions Help Desk	(270) 831-9616
Transfer Information	(270) 831-9828
Veterans Affairs	(270) 831-9627
Workforce Solutions	(270) 831-9658

Administration

President and CEO	Dr. Kris Williams
Interim Chief Academic Officer	Mr. Paul Kasenow
Chief Student Officer	Mr. Keith Sayles
Chief Business Officer	Mr. Jerry Gentry
Chief Advancement Officer	Ms. Jennifer Preston
Dean of Success Grants	Ms. Pam Wilson
Director of Cultural Diversity	Mr. William L. Dixon
Director of Institutional Effectiveness	Mr. Brian McMurtry
Director of Human Resources	Ms. Doris Lake
Chair, Allied Health Division	Dr. Carole Mattingly
Chair, Liberal Arts and Professional Studies Division	Ms. Sharon Burton
Chair, STEM Division	Mr. Eugene Patsalides
Director of Nursing	TBA
Assoc. Dean/Enrollment Management	Mr. Cary Conley
Assistant Dean for Library Services	Mr. Mike Knecht

Faculty

Becker, Kara, Associate Professor, ME, Western Kentucky University, 2003
Bennett, Brenda, Associate Professor, MS, Western Kentucky University, 1995
Blackburn, Catherine, Professor, MFA, East Carolina University, 1993
Buchanan, Marlena, Associate Professor, MSN, University of Southern Indiana, 2000
Bullock, Kimberly, Instructor, MSN, University of Southern Indiana, 2015
Burnett, Terri, Instructor, MSN, University of Southern Indiana, 2013
Burton, Sharon, Professor, MA, Ohio University, 1983
Chappell, Michelle, Assistant Professor, MS, Morehead State University, 2011
Crick, Sarah, Instructor, MNE, University of Southern Indiana, 2015
Dean, Kim, Professor, MS, Western Kentucky University, 1986
Fritts, David, Professor, PhD, Ohio University, 2012
Fuchs, Pennae, Professor, MSN, University of Texas at Austin, 1974
Furbush, Frank, Associate Professor, MS, Southern Connecticut College, 1982
Gary, William, Professor, MA, Florida State University, 1991
Griffis, Katie, Associate Professor, MA, Eastern Illinois University, 2007
Hawa, Randa, Professor, MS, University of Evansville, 1991
Hunt, Cathy, Professor, MS, University of Kentucky, 1980
Jones, Mei, Assistant Professor, MS, University of Southern Indiana, 2006
Joy, Brian, Associate Professor, MBA, National University, 2000
Joy, Lilia, Associate Professor, MA, Murray State University, 2003, MFA, Murray State University, 2015
Kasenow, Paul, Professor, MA, Kent State University, 1987
Kelley, Melissa, Instructor, MSN, University of Phoenix, 2015
Kipling, Sheri, Assistant Professor, MPH, Des Moines University, 2014

Knecht, Michael, Professor, MLS, Emporia State University, 1992, MBA, Western Kentucky University, 1999
Maltby, Lorie, Professor, MA, Ohio University, 1983
Marquess, Alicia, Instructor, MSN, Kaplan University, 2014
Mattingly, Carole, Associate Professor, DNP, Western Kentucky University, 2015
McCarty, Steven, Professor, MA, Western Kentucky University, 1991
Mercer, Tony, Instructor, AAS, Hopkinsville Community College, 2007
Murray, Bridget, Professor, MEd, Indiana State University, 1998
Patsalides, Eugenios, Professor, MA, Western Kentucky University, 1997
Phelps, Barry, Assistant Professor, MA, Western Kentucky University, 2015
Reid, Kevin, Professor, MLS, University of Kentucky, 1993, MA, Purdue University, 1986
Amy Simpson, Instructor, MS, Black Hills State University, 2008
Strawn, Anthony, Professor, MA, University of Evansville, 1979
Taylor, Scott, Assistant Professor, MS, Murray State University, 2010
Threlkeld, Lori, Associate Professor, MS, Murray State University, 1992
Tutt, Larry, Associate Professor, MA, Murray State University, 1981
Wells, Rebecca, Professor, MS, Eastern Kentucky University, 1985
Winstead, Laura, Professor, MS, Murray State University, 1996

Hopkinsville Community College

Mission Statement/Status of Accreditation

Hopkinsville Community College is an inclusive, student-centered educational institution that provides accessible, innovative, and comprehensive learning opportunities within a supportive community that encourages academic excellence. The college sustains strong educational, community, military, agricultural, and economic partnerships to improve the quality of life in the southern Pennyrile region and Fort Campbell.

Hopkinsville Community College promotes excellence in teaching and learning by offering:

- Degree, diploma, and certificate programs and courses that enable students to transfer to four-year institutions, and acquire the knowledge and skills for new or continued employment.
- Developmental, academic and support services that promote student success.
- Customized business and industry training.
- Continuing education and community outreach.
- Adult education.

Hopkinsville Community College is a member of the Kentucky Community and Technical College System and is a public two-year degree granting institution.

Hopkinsville Community College is a member of the Kentucky Community and Technical College System and is a public two-year degree granting institution. Hopkinsville Community College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Hopkinsville Community College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution's significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula

- Associate in Arts
- Associate in Science

Occupational/Technical Curricula

Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

Advanced Nursing Assistant (C)
Air Conditioning Technology (C)
Agricultural Studies (A)
Agricultural Technology (C, D, A)
Automotive Technology (C)
Business Studies:
  Administrative Office Technology (C, A)
  Business Administration Systems (C, D, A)
  Medical Information Technology (C, D, A)
Computer Aided Drafting and Design (C, D)
Computer and Information Technologies (C, A)
Computerized Manufacturing and Machining (C, D)
Construction Technology (C)
Criminal Justice (C, A)
Diesel Technology (C, D, A)
Emergency Medical Services – Paramedic (A)
Emergency Medical Technician (C)
Engineering and Electronics Technology (C, D, A)
General Occupational/Technical Studies (A)
Health Science Technology (A)
Human Services (C, A)
Interdisciplinary Early Childhood Education (C, D, A)
Manufacturing Industrial Technology:
  Electrical Technology (C, D, A)
  Industrial Maintenance Technology (C, D, A)
Medical Assisting (A)
Medical Laboratory Technician (C)
Nursing (A)
Pharmacy Technology (C, D)
Practical Nursing (C, D)
Quality Management Systems (C, D)
Welding Technology (C)

Contact Information

Hopkinsville Community College
720 North Drive, P.O. Box 2100
Hopkinsville, KY 42241-2100
(270) 707-3700 or toll free – (866) 534-2224
hopkinsville.kctcs.edu

Fort Campbell Campus
English Army Education Center
Room 135, 202 Bastogne Avenue
Fort Campbell, KY 42223
(270) 707-3950 or toll free – (866) 317-3950

General Information
(270) 707-3700

Admissions	1-855-22GO-HCC (1-855-224-6422)
Larissa Horn	(270) 707-3813
Adult Education	(270) 707-3926
Gary Dawson	
Advising Center	(270) 707-3820
Deloria Scott	
Testing Center	(270) 707-3826
Martha Metcalfe	
Business Office	1-855-22GO-HCC (1-855-224-6422)
Matthew Davenport	(270) 707-3729
Career and Transfer Services	(270) 707-3827
Kanya Allen	
Workforce Solutions	
Carol Kirves	(270) 707-3750
Disability Services	(270) 707-3801
Dr. Jason Warren	
Distance Learning Support	(270) 707-3903
Ryan Ray	
Financial Aid	1-855-22GO-HCC (1-855-224-6422)
Janet Gunther	(270) 707-3833

Human Resources Yvonne Glasman	(270) 707-3722
International Student Services Dr. Jason Warren	(270) 707-3801
Library Ann Nichols	(270) 707-3762
Public Relations and Marketing Rena Young	(270) 707-3732
Records/Registrar Melissa Stevenson	(270) 707-3811
Manager of External Education Programs- Rotary Scholars/Dual Credit Rachel Westerman	(270) 707-3809
Transfer Information Liaison Kanya Allen	(270) 707-3827
Veterans Affairs Wayne Rhoades	(270) 707-3957
Information Technology Tony Nelson	(270) 707-3771
Diversity & Leadership-Office of Student Engagement Tracey Stewart	(270) 707-3825
Fort Campbell Campus Alisha Lee	(270) 707-3958

Administration

President/CEO	Dr. Jay S. Allen, Jr.
Chief Academic Affairs Officer	Dr. Alissa Young
Chief Student Affairs Officer	Dr. Jason Warren
Chief Business Affairs Officer	Mr. Jeff Horton
Chief of Community, Workforce and Economic Development	Mrs. Carol Kirves
Chief of Institutional Advancement	Mrs. Yvette Y. Eastham
Director of Institutional Effectiveness Vacant	
Information Technology Director	Mr. Tony Nelson
Division of Allied Health	Mrs. Peggy Bozarth
Division of Liberal Arts & Social Sciences Casey	Dr. Ken
Division of Mathematics and Sciences	Mr. Ted Wilson
Division of Professional and Technical Studies	Mr. Greg Bridgeman

Faculty

Akpom, Reginald C, Associate Professor, PhD, Southern Illinois University, 2013
Anderson, Danny L, Instructor, BSN, Austin Peay State University, 2013
Arnold, Jason E, Professor, MS, Murray State University, 2008, MS, Southern Illinois University at Carbondale, 1997
Bain, Scott Alexander, Associate Professor, MS, University of Illinois at Urbana-Champaign, 2004
Beverly, Elizabeth A, Associate Professor, MS, University of Louisville, 2009
Bozarth, Peggy Irene, Professor, MSN, Murray State University, 1997
Braxton-Brown, Justin Dale, Associate Professor, MA, Ohio University, 2002
Bridgeman, Gregory W, Professor, MA, Webster University, 1984
Broadbent, John S, Professor, MA, Austin Peay State University, 2002, MA, Trevecca Nazarene College, 1993
Burrell, Jahrael Victor, Assistant Professor, PhD, Kansas State University, 2009
Carlisle II, Thomas T, Professor, MA, Murray State University, 1994
Casey, Kenneth Stewart, Professor, PhD, Vanderbilt University, 1991
Cawood, Marketa Liska, Professor, MA, State University of New Jersey Rutgers, 2007
Cummins, Christopher Mark, Instructor, MS, The University of Tennessee Knoxville, 2013
Darooka, Meha, Associate Professor, MA, Marshall University, 2005, MBA, Marshall University 2003
Davis, John P, Instructor, PhD., University of Kentucky, 2012
Dougherty, Karen, Associate Professor, M.D., University of Louisville School of Medicine, 1979
Evans, Audrey D, Professor, EDS, Austin Peay State University, 1998
Evans, Kimmel Kirk, Associate Professor, MAS, Embry-Riddle Aeronautical University, 1996, MA, Central Michigan University, 1980
Felton, Kevin E, Professor, EdD, Tennessee State University, 1986
Gunn, Amanda Joy, Assistant Professor, MSN, Western Kentucky University, 2014
Higdon, Terri, Associate Professor, MSN, Murray State University, 2013
Holt, Stephanie, Associate Professor, MA, Eastern Kentucky University, 1994
Howard, YeVette, Instructor, Ed.D., The University of Georgia, 1993
Hunter, James T, Professor, MS, University of Kentucky, 1984
Jackman, Sarah F, Associate Professor, ME, University of Texas at El Paso, 1980, MET, University of Texas at El Paso, 1992
Laffoon-Jackson, Julia, Associate Professor, MA, Western Kentucky University, 1981
Lambruno, Joyce, Associate Professor, MSN, Murray State University, 2010
Larkin, Vernell D, Professor, EdD, University of Kentucky, 2001
Lee, Jason, Instructor, MS, Murray State University, 2014
Lemons, Sherry L, Professor, MS, Austin Peay State University, 1994
Loggins, Nicole L, Instructor, MSN, Vanderbilt University, 2013
Lutz, Roger, Associate Professor, AAS, KCTCS - Hopkinsville Community College, 2004, Certification, CFPIHM and CFPIHT, 2001
McClure, Michael W, Professor, MS, Murray State University, 1981
McCormack, Sherry Lynn, Associate Professor, MS, Murray State University, 2009
Meador, Barbara W, Professor, MA, Austin Peay State University, 1978
Nichols, Linda A, Professor/Librarian, MA, University of Louisville, 2006, MLIS, University of Kentucky, 2000
Offutt, Cynthia Whitsett , Instructor, MSN, Chamberlain College of Nursing, 2013
Partney, Jeffrey A, Associate Professor, Certificate, National Occupational Competency Testing Institute, 1999
Pendleton, Arthur D, Professor, MBA, Western Kentucky University, 2003
Piper, Susan Evangline , Assistant Professor, MSN, Western Kentucky University, 2010
Pniewski, Tommie W, Professor, MSN, University of Evansville, 1977
Prudhomme, Bonny B, Professor, MS, Western Kentucky University, 1998, MA, Ball State University, 1976, MS, Loyola University, 2009
Ralph, Brett E, Professor, MFA, University of Massachusetts, 1993
Ray, Ryan A, Associate Professor, MBA, Murray State University, 1996
Riley, Patrick J, Professor, MA, University of Missouri, 1997
Sandifer, Dana R, Professor, MSN, Murray State University, 1996
Sauermann, Amanda C, Professor, MA, Gannon University, 1993
Sauermann, Bernd Eberhard, Professor, MFA, McNeese State, 1993, MA, McNeese State, 1993
Schultz, Arthur Ray, Associate Professor, MS, Tennessee State University, 2009
Scott, Deloria A, Professor/CC Counselor, MS, Murray State University, 1996
Sims, Derek, Associate Professor, MBA, Murray State University, 2011, MS, Southern Illinois University, 2007
Smith, Robert William, Associate Professor, MAE, Marian University, 2009
Stahl, Anne L, Associate Professor, MA, Austin Peay State University, 1983
Stewart, Sharon K, Assistant Professor, MSN, Walden University, 2008
Stone, Abbey L, BS, Indiana Wesleyan University, 2013
Wilkinson, Daniel M, Professor, MM, Western Kentucky University, 1984
Wilson, Ted H, Professor, MA, Baylor University, 1983
Windsor, Dayle L, Associate Professor, MA, Murray State University, 1971
Young, Alissa L, Professor, Ed.D, University of Kentucky, 2013, MS, Murray State University, 1993
Zieman, Stuart David, Assistant Professor, AAS, KCTCS – Hopkinsville Community College, 2006

Jefferson Community and Technical College

Mission Statement/Status of Accreditation

We open the door to quality education that promotes the economic and cultural vitality of our community, encourages all to discover and achieve their potential, and provides opportunities to turn dreams into realities.

Mission Goals

Jefferson Community and Technical College fulfills its Mission by promoting excellence in programs and services in support of educational opportunity, lifelong learning, and student achievement as expressed in the following goals:

- Support the attainment of regional and statewide educational goals through data informed and inquiry driven strategies to increase retention rates and completion of credentials (Associate Degrees, Diplomas, and Certificates).
- Maximize student achievement through an institutional commitment to effective teaching and support services.
- Enhance workforce readiness and economic development of the community by providing seamless educational opportunities through agreements with adult education, secondary school systems, postsecondary institutions, community groups, and business and industry partners.
- Provide an inclusive, accessible, and safe learning and working environment.
- Exercise responsible stewardship of the College's human, fiscal, and physical resources.

Jefferson Community and Technical College is a member of the Kentucky Community and Technical College System offering career/technical, transfer, and transitional educational opportunities with campuses and locations in Jefferson, Shelby, Carroll, Bullitt, Gallatin, Henry, Oldham, Owen, Spencer, and Trimble Counties.

Jefferson Community and Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Jefferson Community and Technical College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution's significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula

Associate in Arts
Associate in Science

Occupational/Technical Curricula

Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

African American Studies (C)
Air Conditioning Technology (C, D)
Applied Process Technologies (C, D, A)
Apprenticeship Studies (A)
Auto Body/Collision Repair Technician (C, D)
Automotive Technology (C, D, A)
Aviation Maintenance Technology (C, D, A)
Business Studies:
- Administrative Office Technology (C, D, A)
- Business Administration Systems (C, D, A)
- Medical Information Technology (C, D)

Computer Aided Design and Drafting (C, D)
Computer and Information Technologies (C, A)
Computerized Manufacturing and Machining (C, D)
Construction Technology (C, D)
Cosmetology (C, D)
Criminal Justice (A)
Culinary Arts (C, A)
Digital Game and Simulation Design (C)
Education (A)
Emergency Medical Services – Paramedic (C, A)
Emergency Medical Technician (C)
Engineering and Electronics Technology (C, D, A)
Fire/Rescue Science Technology (C, D, A)
General Occupational/Technical Studies (A)
Global Studies (C, A)
Health Information Technology (C, A)
Health Science Technology (A)
Historic Preservation Technology (C)
Homeland Security/Emergency Management (C)
Human Services (C, A)
Industrial Chemical Technology (A)
Insurance and Risk Management (C)
Interdisciplinary Early Childhood Education (C, A)
Invasive Cardiology (C)
Manufacturing Industrial Technology:
- Electrical Technology (C)
- Industrial Maintenance Technology (C, D, A)

Mechatronics (C)
Medical Administrative Services (C)
Medical Assisting (C, D, A)
Medical Laboratory Technology (C, A)
Multi-skilled Systems Technician (C)
Nursing (A)
Occupational Therapy Assistant (A)
Pharmacy Technology (C, D)
Physical Therapist Assistant (A)
Plumbing Technology (C, D)
Practical Nursing (C, D)
Radiography (A)
Respiratory Care (C, A)
Surgical Technology (D, A)
Truck Driver Training (C)
Visual Communication:
- Communication Arts Technology (C, A)
- Multimedia (C)
- Printing (C, D)
- Visual Arts (C)

Volumetric Medical Imaging (C)
Welding Technology (C, D, A)

Contact Information

Jefferson Community & Technical College
109 E. Broadway
Louisville, KY 40202
(502) 213-5333
jefferson.kctcs.edu

Downtown Campus
109 East Broadway
Louisville, KY 40202
(502) 213-5333

Southwest Campus
1000 Community College Drive
Louisville, KY 40272
(502) 213-5333

Carrollton Campus
324 Main Street
Carrollton, KY 41008
(502) 732-4846 or (800) 853-3887

Jefferson Technical Campus
727 W. Chestnut Street
Louisville, KY 40203
(502) 213-5333

Shelby County Campus
1361 Frankfort Road
Shelbyville, KY 40065
(502) 633-5524

Bullitt County Campus
505 Buffalo Run Road
Shepherdsville KY 40165
(866) 634-7418
(502) 213-5333

General Information
(502) 213-5333

Admissions	(502) 213-4000
Bursar's Office	1-855-2GO-JCTC (1-855-246-5282)
Business Office	(502) 213-2103
Center for Community Workforce and Economic Development	(502) 213-2223
Disability Services	(502) 213-2449
Diversity	(502) 213-2268
Financial Aid	1-855-2GO-JCTC (1-855-246-5282)
Human Resources	(502) 213-2118
International Admissions	(502) 213-2496
Library – Bullitt County	(502)-213-7911
Library – Downtown	(502) 213-2154
Library – Jefferson Technical	(502) 213-4167
Library – Southwest	(502) 213-7222
Library – Carrollton	(502) 213-5220
Library – Shelby County	(502) 633-3618
Marketing and Communications	(502) 213-2400
Records	(502) 213-4000
Transfer Information Liaison	(502) 213-4000
Veterans Affairs	(502) 213-2139
Admissions	(502) 213-4000
Bursar's Office	1-855-2GO-JCTC (1-855-246-5282)
Business Office	(502) 213-2103
Center for Community Workforce and Economic Development	(502) 213-2223
Disability Services	(502) 213-2449
Diversity	(502) 213-2268
Financial Aid	1-855-2GO-JCTC (1-855-246-5282)
Human Resources	(502) 213-2118
Library – Bullitt County	(502)-213-7911
Library – Downtown	(502) 213-2154
Library – Jefferson Technical	(502) 213-4100
Library – Southwest	(502) 213-7222
Library – Carrollton	(502) 732-4846
Library – Shelby County	(502) 633-3618
Marketing and Communications	(502) 213-2400
Records	(502) 213-4000
Transfer Information Liaison	(502) 213-4000
Veterans Affairs	(502) 213-2139

Administration

President	Dr. Ty Handy
Vice President for Academic and Student Affairs	Dr. Diane Calhoun-French
Dean of Academic Affairs – Downtown Campus	Dr. Randall Davis
Dean of Academic Affairs and Extended Campuses/ Academic Initiatives- Southwest Campus	Donna Miller
Dean of Academic Affairs - Jefferson Technical Campus	Dr. Telly Sellers
Dean of Student Affairs and Enrollment Management	Dr. Laura Smith
Dean of System Initiatives	Vincent DiNoto Jr.
Director of Carrollton Campus	Susan Carlisle
Director of Shelby County/Bullitt County Campuses	Dr. Denise Gray
Director of Human Resources	Toni E. Whalen
Dean of Workforce Solutions	Mary Ann Hyland-Murr
Director of Institutional Effectiveness	Dr. Jo Zausch
Division of Arts and Humanities	Marlisa Austin
Division of Business and Advanced Technology	Dr. Bruce Jost
Division of Social and Behavioral Sciences –	Charles McCombs
Division of Allied Health	Kara Schotter
Division of Nursing	Sonia Rudolph
Division of Mathematics	Drew Wlkerson
Division of Natural Science	Kaya Muller
Division Trade and Industry	Grant Gamble
Director of Library Services	Sheree Williams

Faculty

Ackerman, Jennifer, Associate Professor, MA, University of Louisville, 1993
Adams, Constance, Assistant Professor, MSN, McKendree University, 2007
Adams, James, Associate Professor, MHA, University of Phoenix, 2007
Adams, Jill, Associate Professor, MA, East Carolina University, 1998
Arterburn, Kay Poindexter, Professor, MAT, University of Louisville, 1987
Asamoah, Samuel R, Associate Professor, MBA, Pittsburg State University, 1989
Ashley, Barbara R, Professor, PhD, University of Pittsburgh, 1981
Attarzadeh, Hamid, Associate Professor, MS, University of Louisville, 1991
Austin, Marlisa R, Professor, MA, Union College, 1999
Bartley, Brandon, Professor, MS, Virginia Tech, 2003
Beebe, Patricia, Professor, MA, University of Kentucky, 1976
Betts, Autumn, Associate Professor, MSW, Southern Baptist Theological Seminary, 1996
Bloyd, Deborah, Associate Professor, MSN, University of Louisville, 1984
Boswell, Melanie A, Professor, MS, Florida State University, 2000
Boyd, Lisbeth, Assistant Professor, MS, Murray State University, 2008
Buckler, Michael, Associate Professor, MA, University of Louisville, 1996
Burks, Ishmon, Assistant Professor, MA, City University of New York, 1979
Butler, Casandra M., Instructor, AAS, Jefferson Community and Technical College, 2013
Calhoun-French, Diane, Professor, PhD, University of Louisville, 1982
Cartwright, Andrea, Assistant Professor, MA, University of Louisville, 2006
Changaris, Linh T., Associate Professor, MS, Western Kentucky University, 2004
Charasika, Margie W, Professor, EdD, Spalding University, 1998
Cheatham, Cathy A, Instructor, MEd, Western Kentucky University, 1979
Chelf, Eva, Instructor, MAT, University of Louisville, 2008
Cooper, David L, Professor, MA, Atlanta University, 1975
Couch, Kristi, Instructor, BS, Indiana University, 2000
Crawford, Candice C, Professor, PhD, Rutgers University, 1997

Crawford, Gail A, Associate Professor, AAS, Jefferson Community College, 1985
Cummings, Deloris J, Associate Professor, DPT, University of Montana, 2012
Cummings, Marc L., Associate Professor, MEd, University of Louisville, 1976
Davis, Helen M, Professor, MBA, University of Kentucky, 1976
Davis, Randall J, Professor, PhD, University of Wisconsin-Milwaukee, 1989
Dearing, Laura A, Professor, MFA, University of Memphis, 1998
Deeley, Nina R, Professor, MSLS, University of Kentucky, 1994
Diedrich, Phyllis L, Professor, MEd, University of Louisville, 1990
DiNoto Jr, Vincent A, Professor, MA, Indiana State University, 1979
DiPaola, Stephen, Professor, BS, Johnson & Wales University, 1994
Early, Glen A, Professor, MS, University of Louisville, 1974
Ecker, David P, Associate Professor, PhD, University of Kentucky, 1991
Edgar, Brenda, Associate Professor, MA, University of Pittsburgh, 1997
Eichholtz, Lisa A, Associate Professor, MLS, Syracuse University, 1992
Eiden, Laurie A, Professor, MS, University of Louisville, 2003
Elmes, Brandon, Assistant Professor, MEng, University of Louisville, 2011
Estes, Michael, Instructor, MFA, University of Notre Dame, 2005
Eubanks, Sandra L, Professor, PhD, Bowling Green State University, 1991
Finney, Ann M, Associate Professor, MEd, University of Louisville, 1989
Florence, Anissa R, Associate Professor, MA, University of Louisville, 2001
Florence, Paul A, Associate Professor, MS, University of Louisville, 1995
Galyon, Maria, Associate Professor, MBA, Morehead State University, 1993
Gamble, Grant, Associate Professor, BST, Pittsburg State University, 1995
Gibson, Maureen, Associate Professor, MA, Western Kentucky University, 1990
Gittings, Jennie M, Associate Professor, MSN, University of Louisville, 1992
Goldsby, Luanne M, Professor, MS, North Texas State University, 1983
Gonzalez, Orlando, Associate Professor, MS, University of Cincinnati, 2001
Graney, Christopher M, Professor, MA, University of Virginia, 1990
Gray, Denise A, Professor, EdD, Spalding University, 1997
Gummer, Rhonda D, Professor, MSW, University of Louisville, 2002
Hall, Jill W, Professor, PhD, University of Kentucky, 1998
Hamilton Jr, William H, Associate Professor, PhD, University of Louisville, 2008
Hanson, Richard H, Associate Professor, PhD, University of Kentucky, 1996
Hardin, Charlotte V, Associate Professor, BS, Murray State University,-2006
Hatfield, Todd, Instructor, 20 years teaching experience, 25 years occupational experience
Higgins, Linda C, Professor, MEd, University of Louisville, 1996
Hill, Michael E, Associate Professor, EdS, University of Alabama, 1981
Hogan, Catherine M, Professor, MSN, University of Kentucky, 1983
Howard, Chad, Associate Professor, MS, University of Kentucky, 2003
Hubrich, Charlotte Hammett, Associate Professor, MFA, University of Louisville, 1987
Jackson, Mary B, Professor, MA, Western Kentucky University, 1990
Jacob, Sherry E, Associate Professor, MBA, Webster University, 2002
James, Debra K, Professor, MSN, University of Evansville, 1985
Johnson, Gerald R, Professor, MS, Eastern Kentucky University, 1989
Johnson, Mark D, Associate Professor, MA, University of Louisville, 1985
Johnson, Rafe A, Professor/Librarian I, MSLS, University of Kentucky, 1990
Jones, Melvin D, Professor, MM, Western Kentucky University, 1979
Jost, Bruce P, Professor, PhD, University of Louisville, 2008
Karcher, Mickie, Professor, MA, Western Kentucky University, 1993
King, Dallas, Assistant Professor, AAS, Jefferson Community and Technical College,
Klein, Linda, Associate Professor, MA, University of Louisville, 1987
Kuhman, Mary B., Associate Professor, EdD, Nova Southeastern University, 2007
Kutnicki, Faith H, Associate Professor, MS, University of Kentucky, 1972
Lafferty, Kaye, Professor, PhD, University of Louisville, 2015
Langness, Betsy, Professor, MEd, University of Louisville, 1995
Larkin, Pamela B, Professor, MAT, University of Louisville, 1992
Larson, Douglas, Associate Professor, MS, University of Louisville, 1998
Lawrence, Lindsey J, Professor, BGS, Indiana University-Southeast, 2001
Leasor, James, Assistant Professor, AAS, Elizabethtown Community and Technical College, 2015
Lee, Duane E., Instructor, MPA, Kentucky State University, 2008
Leonard, Mona F, Professor, MA, Howard University, 1989
Leslie, Tony, Assistant Professor, MEd, Western Kentucky University, 1989
Limeberry, John W, Associate Professor, MA, Ball State University, 1989
Lites, William W, Professor, PhD, Southern Baptist Theological Seminary, 1991
Lohman, Linda C, Associate Professor, MA, Spalding University, 1988
Long, John P, Professor, MS, University of Kentucky, 1988
Lotz, Anne, Professor, MA, Kent State University, 1999
Lowrey, Kathryn E, Associate Professor, PhD, University of Louisville, 2010
Lueke, Elizabeth M, Associate Professor, EdS, Spalding University, 2000
Lutz, Terry W, Professor, MFA, University of Kentucky, 1984
Lyalina, Victoria, Associate Professor, MA, University of Louisville, 2000
Malone, Mary E, Professor, MA, MSN Spalding University, 1982, 1987
Mangum, David, Associate Professor, MA, Murray State University, 2006
Martinson, Caroline D, Professor, MEd, University of Louisville, 1971
Matheny, Meg, Professor, MA, University of Kentucky, 1999
Mattingly, Diane, Assistant Professor, MA, Western Kentucky University, 2011
Mattingly Jr, Robert A, Professor, MS, University of Louisville, 1990
McCombs, Charles R, Professor, MA, University of Manitoba, 1975
McNeill, Marilyn D, Professor, MSN, University of Louisville, 1990
Meeks, Susan L, Associate Professor, MA, Webster University, 1998
Miller, Darla Faye, Associate Professor, MEd, University of Louisville, 2004
Miller, Donna R, Assistant Professor, MA, University of Louisville, 2007
Minnis, Angela, Associate Professor, MSBC, Spalding University, 2008
Mohr, April L, Professor, MA, Florida Atlantic University, 1990
Mollette, Nancy R, Associate Professor, MLS, University of Kentucky, 1980
Motes, John B, Professor, MFA, University of Tennessee, 1989
Muller, Kaya, Associate Professor, MS, Purdue University, 1999
Nance, Robert D., Instructor, AAS, Jefferson Community and Technical College, 2007
Norfleet, Ronn, Associate Professor, MDiv, Southern Baptist Theological Seminary, 1989
Nowicke, Robert G., Instructor, MA, Western Kentucky University, 1978
O'Brien, Cheryl A, Professor, MEd, University of Louisville, 1993
O'Brien, Nicholas B, Instructor, AAS, Jefferson Community and Technical College
Olsen, Bobby G, Professor, MAT, Northwest Missouri State University, 1978
Pack, Don, Professor, EdD, University of Louisville, 1999
Parry, Daniel, Associate Professor, EdD, University of Louisville, 2000
Peters, Jane, Associate Professor, PhD, University of Kentucky, 2005
Phillips, Greg, Assistant Professor, AAS, Jefferson Community and Technical College, 2012
Pillitteri, Gerald J, Assistant Professor, AAS, Jefferson Community & Technical College, 2012
Pitchford, Jennifer, Assistant Professor, BS, University of Evansville, 1997
Prather, Mark C, Associate Professor, BA, Indiana University, 1989
Pruett, Stephen R, Professor, PhD, University of Louisville, 1997
Purvis, Charles D, Professor, MS, State University of New York, 1989
Ragade, Anila R, Professor, PhD, University of Louisville, 1988
Rasras, Awad R, Associate Professor, MA, University of Kansas, 1985
Reisner, Caroline, Assistant Professor, MS, Eastern Kentucky University, 2007
Repper, Frank, Associate Professor, MM, Eastern Kentucky University, 1983
Riedel, Donna D, Associate Professor, MS, University of Massachusetts, 1987
Riedling, Robert L, Professor, MS, University of Louisville, 1997
Rodgers, Claud D, Associate Professor, MA, University of Louisville, 1968
Rodski, Peter A, Professor, MS, Eastern Kentucky University, 1992
Rudolph, Sonia R, Associate Professor, MSN, Spalding University, 2003
Savells, Constance, Instructor, MPH, Ohio State University, 2003
Schotter, Kara, Assistant Professor, MA, University of Louisville, 2012
Sellars, Telly R, Professor, EdD, Spalding University, 2006
Sexton, Gerald, Instructor, BT, Jacksonville State University, 1990
Shields, Kevin Blane, Instructor, BS, Kentucky Wesleyan College, 2013
Smithy, Pamela, Associate Professor, MS, Quinnipiac University, 2011
Snook, Stephen, Instructor, AAS, Jefferson Community and Technical College, 2014
Spears, Sandra L, Professor, MS, Western Kentucky University, 1974
Sprinkle, Amy C, Professor, MS, Eastern Kentucky University, 1986
Stevens, Becky, Professor, MAE, Western Kentucky University, 2008
Stewart, Amelia, Professor, PhD, Ohio University, 1987
Stewart, James H, Associate Professor, MS, Western Kentucky University, 1991
Stokes, Kevin B, Professor, MA, Washington State University, 1992
Taylor, Stacy, Associate Professor, MA, University of Louisville, 1999
Terhune, Jerry D, Professor, PhD, University of Minnesota, 1976
Thomas, Leonard, Instructor, MA, University of Louisville, 2010
Thorne, James G, Associate Professor, MAT, University of Louisville, 1976
Tomei Jr., Dontoe A, Assistant Professor, MA Eastern Illinois University, 1996
Varner, Katy L, Professor, EdD, Spalding University, 2000
Veigl, Victoria L, Associate Professor, PhD, Indiana University, 1980
Vogel, David M, Associate Professor, PhD, University of Louisville, 2002
Waggoner, Reneau Y, Associate Professor, MA, Western Kentucky University, 1999
Walford, Ronald M, Professor, MA, University of Louisville, 1967
Ward, John, Associate Professor, MBA, University of Louisville, 2000
Watters, Keith B, Instructor, Certification in FAA Airfram and Powerplant
Wechter, Bree, Associate Professor, MA, Eastern Illinois University, 2002
Weldon, Betty E, Professor, MA, University of Louisville, 1986
Wheat, Valerie J., Associate Professor, PhD, University of Cincinnati College of

Medicine, 2001
White, Deborah C, Professor, MSN, University of Kentucky, 1982
Wilburn, Mark S, Professor, PhD, Ohio University, 1987
Wiles, Thomas S, Professor, MS, University of Louisville, 1990
Wilkerson, Andrew, Assistant Professor, MS, University of Nebraska, 2010
Williams, Sheree Huber, Professor, MSLS, University of Kentucky, 1981
Wright, Catherine, Professor, MA, Marshall University, 1988
Wright, Mark, Professor, MEng, University of Louisville, 1992
Yocum, Heather L, Assistant Professor, MA, Northern Kentucky University, 2010
Zausch, Jo Fouts, Professor, EdD, Spalding University, 1996

Correctional Sites

Green River*

Edelen, Cathy L, Associate Professor, MA, Murray State University, 1983
Lovell, Karen, Instructor, BS, University of Kentucky, 1973
Piper, Sherry A, Professor, MA, Western Kentucky University, 1998

Eddyville (KSP)*

Belt, Danny, Instructor, Master Electrician License
Fowler, Lori, Instructor, BA, Eastern Kentucky University, 1994
Phillips, Stephen, Associate Professor, MS, Murray State University, 2003
Renn, Robert D, Instructor, MS, University of Kentucky, 1986

LaGrange (KSR)*

Bledsoe, Marsha C, Professor, MAT, University of Louisville, 1997

Luther Luckett*

Lawrey, Charles D, Associate Professor, AS, Jefferson Community and Technical College, 2006

Pewee Valley (KCIW)*

West Kentucky*

Herring, Steven M, Associate Professor, MS, Murray State University, 1999
Kinnis, Jared, Instructor, BS, Western Kentucky University, 2005
Walker, Margaret, Assistant Professor, BA, Murray State University, 1992

**Note: HB 164 passed during the 2010 Kentucky General Assembly transferred management oversight and responsibility for Corrections Education programs to the Department of Corrections, effective July 1, 2010. Some faculty listed could have elected to transfer to the Department of Corrections.*

Madisonville Community College

Mission Statement/Status of Accreditation

To advance an enduring and enthusiastic commitment to student-centered learning and achievement.

In support of our mission and as a public comprehensive community college and member of the Kentucky Community College and Technical College System, Madisonville Community College will:

- offer two-year associate degree curricula transferable to all colleges and universities in Kentucky;
- offer two-year associate of applied science, career-oriented technical degree curricula for immediate employment;
- offer diploma and certificate level programs, not intended for transfer, but designed to meet the changing needs of business and industry;
- provide flexible customized training opportunities for area employers;
- provide adult literacy services;
- provide non-credit personal enrichment programming; and
- provide arts appreciation and arts education opportunities.

The mission statement derives from an institution-wide commitment to these values:

- Shared responsibility for learning between student and teacher.
- Mutual respect and open communication.
- Open inquiry and data-based decision making.
- Effective collaboration and teamwork.
- Flexibility, adaptability and availability.
- Professional behavior and personal effectiveness.
- Community service and responsiveness.
- Continuous improvement.
- Diversity in all its dimensions.
- Sustainability.
- Life-long learning.

Madisonville Community College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Madisonville Community College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution's significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula

Associate in Arts
Associate in Science

Occupational/Technical Curricula

Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

Advanced Integrated Technology (C, A)
Business Studies:
Business Administration Systems (C, D, A)
Medical Information Technology (C, D, A)
Computer and Information Technologies (C, A)
Criminal Justice (C, A)
Emergency Medical Services – Paramedic (C, A)
Emergency Medical Technician (C)
Energy Management (C, D, A)
Engineering Related – Project Lead the Way (PLTW) (C)
Fire/Rescue Science Technology (C, D, A)
General Occupational/Technical Studies (A)
Healthcare Technology Management (C, A)
Health Science Technology (A)
Human Services (C, A)
Interdisciplinary Early Childhood Education (C, D, A)
Medical Laboratory Technology (C, D, A)
Mining Technology (C, A)
Nursing (A)
Occupational Therapy Assistant (A)
Paralegal Technology (C, A)
Physical Therapist Assistant (A)
Practical Nursing (C, D)
Radiography (A)
Respiratory Care (A)
Surgical First Assisting (C, A)
Surgical Technology (C, D, A)
Welding Technology (C, D)

Contact Information

Madisonville Community College
2000 College Drive
Madisonville, KY 42431
(270)821-2250 Fax (270)824-1866
madisonville.kctcs.edu

Health Sciences Campus
750 N Laffoon Street
Madisonville, KY 42431
(270)824-1751

ACE2 and Assessment Center
150 School Avenue
Madisonville, KY 42431
ACE2 (270) 824-1821
Assessment Center (270) 824-1702

Muhlenberg Campus
406 W Everly Brothers Boulevard
Central City, KY 42330
(270)757-9881

Glema Mahr Center for the Arts
2000 College Drive
Madisonville, KY 42431
(270) 821-ARTS

General Information

(270) 821-2250

Admissions	(270) 824-8643
Business Office	1-855-55GO- MCC (1-855-554-6622)
Workforce Solutions	(270) 824-8659
Continuing Education	(270) 824-8660
Disability Services	(270) 824-1708

Financial Aid	1-855-55GO-MCC (1-855-544-6622)
Human Resources	(270) 824-8649
Library	(270) 824-1722
Public Relations	(270) 824-8581
Records and Registrar	(270) 824-8575
Veterans Affairs	(270) 824-8578
Website	madisonville.kctcs.edu

Administration

President	Dr. Cynthia S. Kelley
Chief Academic Affairs Officer	Dr. Deborah M. Cox
Chief Student Affairs Officer	Dr. Jonathan V. Parrent
Chief Business Affairs Officer	E. Ray Gillaspie
Workforce Solutions	Michael A. Davenport
Grants, Planning, and Effectiveness	David A. Schuermer
Institutional Advancement	J. Christopher Woodall
Public Relations Coordinator	B. Joyce Riggs
Division of Applied Technologies	Matthew S. Luckett
Division of Arts & Humanities	Dr. Mary Bl Werner
Division of Allied Health	Stephanie A. Taylor
Division of Nursing	E. Shannon Allen
Division of Mathematics and Sciences	Dr. John Lowbridge
Division of Social and Behavioral Sciences	Natalie F. Cooper

Faculty

Adams, Sara Lyn Balduf, Professor, Ph.D., Florida State University, 2008
Adkins, Christy S, Professor, MS, Washington University, 2011
Allen, Barton E, Assistant Professor, BS, Western Kentucky University, 2002
Allen, Clarissa E, Associate Professor, MA, East Tennessee State University, 2007
Allen, E Shannon, Professor, MSN, University of Kentucky, 2001
Archila, Amberly Brooke, Assistant Professor, MA, Murray State University, 2009
Bascom, Paula J. Sinopoli, Lecturer, MS, University of Southern Mississippi, 1996
Batts, Kevin C, Instructor, MBA, Murray State University, 2011
Bennett, Tate R, Professor, MS, West Virginia University, 1989
Berges, Cherry L, Professor/Librarian I, MSLS, Clarion University, 1992
Bidwell, Jeffrey L, Professor, MA, Murray State University, 1999
Blue, Brandy M, Instructor, BSN, Murray State University, 2015
Burton, Misty, V, Assistant Professor, BS, Eastern Kentucky University, 1995
Clayton, Wendy Dail, Professor, MSN, Western Kentucky University, 2008
Conrad, Karol A, Professor, MS, Murray State University, 1995
Cook, Ava M, Associate Professor, BSN, University of Louisville, 2000
Cooper, Natalie F, Professor, MS, Murray State University, 1998
Cunningham, Chester M, Professor, MBA, Murray State University, 1998
Davis, Reid A, Associate Professor, BS, Western Kentucky University, 1999
Davis, Sharon D, Associate Professor, MA, University of Kentucky, 1993
Davis, Timothy F, Associate Professor, MS, Murray State University, 2013
Deal, Andrea L, Professor, MA, Murray State University, 2005
Deal, Robert Michael, Associate Professor, BS, Mid-Continent University, 2010
Edens, Kellie Brooke, Associate Professor, MSN, Northern Kentucky University, 2014
Elder, Loretta J, Associate Professor, DNP, Eastern Kentucky University, 2016
Florea, Jeffrey M, Professor, MS, Murray State University, 2000
Florea, Katrina M, Assistant Professor, MS, Murray State University, 1999
Fouse, Patricia T, Instructor, MA, Murray State University, 2007
Fugate, Sharon J, Professor, MS, Morehead State University, 1990
Gallegos, Darlena, Associate Professor, BS, Kaplan University, 2008
Garrity, Savanna C, Professor, MPA, Murray State University, 2008
Gibson, Tonia R, Professor, MS, Murray State University, 2008
Gooch, Joe T, Professor, MA, University of Indiana, 1966
Grace, April M, Professor, MA, Western Kentucky University, 2005
Hagan, Gregory D, Professor, MFA, Murray State University, 2007
Hawkins, Judith G, Professor, MS, University of Kentucky, 1985
Hayes, Kelly A, Associate Professor, MS, Murray State University, 2014
Hernandez-Stevenson, Brittney, Instructor, MS, Murray State University, 2013
Hewell, Sherry D, Professor, MEd, University of Louisville, 1993
Hill, Clarissa Rana, Professor, MS, Murray State University, 2007
Janssen, Mary E, Professor, PhD, Indiana University, 1995
Johnson, Bartley J, Instructor, MS, Southern Illinois University, 2015
Johnson, Felecia K, Professor, MA, Murray State University, 1987
Jones, Joey R, Professor, MS, Murray State University, 2012
Jones, Sara Jane, Associate Professor, DNP, Eastern Kentucky University, 2016
Lange, Paula Louise, Associate Professor, MS, Indiana University, 1996
Latham, Dawn L, Assistant Professor, MSN, Western Kentucky University, 2015
Lear, Elyssa Gayle, Professor, MS, Western Kentucky University, 2001
Lear, Tracie D, Associate Professor, BSN, University of Louisville, 2001
Lee, Lisa E, Professor, MAE, Western Kentucky University, 1998
Lewis, Harry R, Associate Professor, MS, University of Evansville, 1986
Littlehale, Tracy, Associate Professor, MS, Northeastern University, 1999
Lowbridge, John, Associate Professor, PhD, South Bank University, 1971
Luckett, Matthew S, Associate Professor, BS, Western Kentucky University, 2014
Lutz, Rebecca Faith, Associate Professor, MSN, Indiana Wesleyan University, 2012
Markwell, Greshin M, Assistant Professor, MSN, Western Governors University, 2014
Martin, Timothy S, Assistant Professor, MA, Liberty University, 2011
McClearn, Nancy J, Associate Professor, MA, Murray State University, 1997
Melton, Chandy D, Assistant Professor, MA, Murray State University, 2000
Mitchell, Judith A., Assistant Professor, MSN, Western Kentucky University, 2015
Moore, Lizabeth A, Professor, MS, Murray State University, 1989
Oglesby, Sarah A, Professor, SCT, Murray State University, 1978
Peyton, Sarah R, Associate Professor, MSN, Murray State University, 2011
Poole, Mary J, Associate Professor, MAEd, Western Kentucky University, 1984
Pullin, Sheri D, Instructor, BSN, University of Southern Indiana, 2015
Qualls, Mary Kim, Associate Professor, MS, Belmont University, 2004
Richmond, Camille E, Associate Professor/Librarian II, MLIS, Louisiana State University, 1991
Roy Jr, Lawrence, Professor, MFA, George Mason University, 1989
Schnapf, Barbara A, Instructor, MS, University of Evansville, 1997
Shifflett, George M, Professor, PhD, University of Virginia, 1989
Shockley, Sonya M, Associate Professor, MAT, Webster University, 2005
Siddon, Tina M, Professor, MS, Murray State University, 2014
Simons, Kimberly Lee, Professor, MA, Murray State University, 2001
Skeen, Amanda F, Assistant Professor, MPT, University of Evansville, 2003
Talukdar, Aseem, Associate Professor, PhD, University of Cincinnati, 2008
Taylor, Stephanie A, Associate Professor, MAE, Western Kentucky University, 2013
Tillen, Monica D, Professor, MS, Western Kentucky University, 1992
Vander Ploeg, Scott D, Professor, PhD, University of Kentucky, 1994
Welch, Jennifer R, Assistant Professor, MA, Western Kentucky University, 2009
Werner, Mary B, Professor, PhD, Northern Illinois University, 1996
West, Marlena K, Professor, MACT, Western Kentucky University, 1976
West, Robin R, Assistant Professor, PhD, Indiana State University, 2008
Woodall, Kimberly D, Instructor, AAS, Madisonville Community College, 2007
Woodall, Marsha Dianne, Professor, DNP, Eastern Kentucky University, 2016
Wright, Debbie L, Professor, MA, Southern Illinois University, 1988
Young, Patricia A, Professor, MPA, Murray State University, 1999

Maysville Community and Technical College

Mission Statement/Status of Accreditation

Maysville Community and Technical College (MCTC) challenges learners to accomplish their educational, career, and personal development goals.

Goals of the College:

- Provide arts and science courses and associate degrees for transfer to baccalaureate institutions.
- Offer technical degrees, diplomas, certificates, and courses for employment and career advancement.
- Provide transitional and adult education offerings.
  Deliver workforce training and services to support individual, community, and economic development.
- Provide academic and student support to enhance student learning.

Maysville Community and Technical College, a member of the Kentucky Community and Technical College System, is a public two-year degree granting institution responding to and serving the needs of communities in the northeastern Kentucky region.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution's significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula

Associate in Arts
Associate in Science

Occupational/Technical Curricula

Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

Advanced Nursing Assistant (C)
Air Conditioning Technology (C, D)
Applied Process Technologies (C)
Auto Body/Collision Repair Technology (C, D)
Automotive Technology (C, D)
Broadcast Television Technologies (C)
Business Studies:
  Administrative Office Technology (C, D, A)
  Business Administration Systems (C, D, A)
  Medical Information Technology (C, D, A)
Computer Aided Drafting and Design (C, D)
Computer and Information Technologies (C, A)
Computerized Manufacturing and Machining (C, D, A)
Construction Technology (C, D)
Cosmetology (C)
Criminal Justice (C, A)
Culinary Arts (C, A)
Diesel Technology (C, D)
Digital Game & Simulation Design (C)
Emergency Medical Services – Paramedic (C)
Emergency Medical Technician (C)
Energy Systems (C, A)
Equine Studies (C)
Fire/Rescue Science Technology (C, D, A)
General Occupational/Technical Studies (A)
Horticulture (C, D)
Interdisciplinary Early Childhood Education (C, D, A)
Logistics and Operations Management (C)
Manufacturing Industrial Technology:
  Electrical Technology (C, D)
  Industrial Maintenance Technology (C, D, A)
Medical Assisting (C, D)
Medical Laboratory Technology (C, A)
Nursing (A)
Plastics Processing (C)
Plumbing Technology (C, D)
Practical Nursing (C, D)
Real Estate (C)
Respiratory Care (A)
Truck Driver Training (C)
Welding Technology (C, D)
Workplace Safety Specialist (C)

Contact Information

Maysville Campus
1755 US Hwy 68
Maysville, KY 41056
(606)759-7141
maysville.kctcs.edu

Rowan Campus
609 Viking Drive
Morehead, KY 40351
(606)783-1538
maysville.kctcs.edu

Licking Valley Campus
319 Webster Avenue
Cynthiana, KY 41031
(859)234-8626
maysville.kctcs.edu

Montgomery Campus
201 Calk Avenue
Mt. Sterling, KY 40353
(859)499-6282
maysville.kctcs.edu

Additional Sites

Rowan Campus Downtown Extension
229 Flemingsburg Road
Morehead, KY 40351
(606)780-0628
(606)780-0629
maysville.kctcs.edu

Maysville Campus

General Information	(606) 759-7141
Admissions	Ext. 66185
Business Office	1-855-GO-9MCTC (1-855-469-6282)
Workforce Solutions	Ext. 66120
Continuing Education	Ext. 66120
Disability Services	Ext. 66209
Financial Aid	1-855-GO-9MCTC (1-855-469-6282)
Human Resources	Ext. 66119
Library	Ext. 66206
Public Relations	Ext. 66247
Records	Ext. 66184
Transfer Information Liaison	Ext. 66148
Veterans Affairs	Ext. 66196
Website	maysville.kctcs.edu

Rowan Campus

General Information	(606) 783-1538
Admissions	Ext. 66362
Business Office	1-855-GO-9MCTC (1-855-469-6282)
Financial Aid	1-855-GO-9MCTC (1-855-469-6282)
Human Resources	Ext. 66310
Library	Ext. 66366
Records	Ext. 66314
Workforce Solutions	606-780-0069
Website	maysville.kctcs.edu

Licking Valley Campus

General Information	(859) 234-8626
Admissions	Ext. 66436
Business Office	1-855-GO-9MCTC (1-855-469-6282)
Financial Aid	1-855-GO-9MCTC (1-855-469-6282)
Library	Ext. 66417
Records	Ext. 66405
Workforce Solutions	Ext. 66418
Website	maysville.kctcs.edu
General Information	(859) 234-8626
Admissions	Ext. 66436
Business Office	1-855-GO-9MCTC (1-855-469-6282)
Financial Aid	1-855-GO-9MCTC (1-855-469-6282)
Library	Ext. 66417
Records	Ext. 66405
Workforce Solutions	Ext. 66419
Website	maysville.kctcs.edu

Administration

President/CEO	Stephen M. Vacik, Ed.D.
Rowan Campus Branch Campus Director	Russ Ward
Rowan Campus Academic Coordinator	Vacant
Provost	Juston Pate, Ph.D.
Chief Business Officer	George Jones
Chief Officer, Workforce Solutions	Barbara Campbell
Licking Valley Campus Branch Campus Director	Vacant
Licking Valley Campus Academic Coordinator	David Lawler
Montgomery Campus Education Center Director	Rebecca Morton
Resource Development	Cara Clarke
Public Relations	Jessica Kern
Division of Industrial Technologies	Vacant
Division of Liberal Arts and Education	Kathleen Mellenkamp
Division of Math, Natural Science and Agriculture	Angela Fultz, Ph.D.
Division of Health Science Technologies	Debbie Nolder
Division of Business and Computing Technologies	Darla Hunt
Dean of Student Development	Vacant
Chief Finance and Facilities Officer	George Jones
Associate Dean of Finance	Vacant
Coordinator of Distance Learning	Kimberly Sparks
Associate Dean of Institutional Planning, Research, and Effectiveness	Pam Stafford
Associate Dean of Academic Support Services; Transfer Coordinator	Dana Calland, Ed.D.
Director, Adult Education/College Preparation	Sherry Stacy
Director of Cultural Diversity	Millicent Harding
Director of External Education Programs	Billie Barbour
Director of Financial Aid	Sandy Power
Director of Grant Development	Vacant
Director of Human Resources	Sandi Estill
Director of Information Technology	Vacant
Director of Library Services	Sonja Eads

Faculty

Adler, Jennifer, Instructor, MS, Eastern Kentucky University, 2010
Alburg, Tammy, Instructor, MA, Morehead State University, 1994
Barnett, Kenneth, Associate Professor, BS, Morehead State University, 2004
Bone, Martha D, Professor, DA, Middle Tennessee State University, 1985
Boone, Debora A, Associate Professor, BSN, University of Phoenix, 2009
Boyd, Tony, Associate Professor, MA, Morehead State University, 1989
Burns, Tammy B, Assistant Professor, AAS, Maysville Community College, 1988
Butler, Deanna J, Associate Professor, AAS, Morehead State University, 1981
Calland, Dana J Taylor, Professor, EdD, Grambling State University, 2007
Callihan, Jeffrey C, Associate Professor, BS, Morehead State University, 2002
Carroll, Melissa L, Professor, MA, Morehead State University, 1998
Clarke, Ginger, Assistant Professor, BSN, Auburn University, 1990
Curtis, Tina, Assistant Professor, MA, Northern Kentucky University, 2009
Dickison, Jeanette C, Professor, MFA, Ohio University, 1985
Druen, Joshua W, Associate Professor, MA, Morehead State University, 2006
Eads, Sonja R, Professor/Librarian I, MLS, University of Kentucky, 1985
Flora, Charlene, Assistant Professor, BA, University of Tennessee, 2010
Frodge, Shannon C, Associate Professor, MSN, Northern Kentucky University, 2007
Fultz, Angela, Associate Professor, PhD, University of Kentucky, 1996
Garrison, Janet L, Professor, MBA, University of Kentucky, 1992
Goodpaster, Sagan, Assistant Professor, MS, Eastern Kentucky University, 2013
Graves, Robert L, Professor, MS, Morehead State University, 1992
Hamm, Robert G, Professor, BS, Morehead State University, 1985
Hauke, Barbara, Assistant Professor, MS, University of Cincinnati, 1989
Haley-Rosser, Vicky, Assistant Professor, BSN, University of Kentucky, 1984
Hawkins, Adam, Assistant Professor, BS, Morehead State University, 2010
Hawkins, Jack, Assistant Professor, AAS, Maysville Community and Technical College, 2010
Hendricks, Alison, Assistant Professor, MSN, Indiana Wesleyan University, 2014
Howard, Barry D, Associate Professor, AA, Morehead State University, 2007
Hunt, Darla A, Associate Professor, MSIS, Morehead State University, 2007
Hunter, Nancy D, Professor, EdS, University of Kentucky, 1999
Hyrcza, Alexander L, Professor, MA, Western Kentucky University, 1990
Jones, Gordon, Instructor, AAS, Maysville Community and Technical College, 1989
King, John E, Professor, AA, Morehead State University, 2007
Klee, John R, Professor, MHE, Morehead State University, 1977
Lawler, David J, Professor, MS, University of Kentucky, 1990
Lightner, Rebecca S, Professor, MSN, University of Kentucky, 1995
Lowery, Bethany L, Associate Professor, BSN, Morehead State University, 2002
Maddox, Natasha, Assistant Professor, MBA, Morehead State University, 2013
May, Elena, Assistant Professor, MA, Novosibirsk State University, 1990
McDavid, Thea, Instructor, BSN, Walden University, 2013
McDowell, Susan E, Associate Professor, MSN, Northern Kentucky University, 2003
McKinney, Dallas, Instructor, BA, Morehead State University, 2010
Mellenkamp, Kathleen M, Professor, MA, Morehead State University, 1977
Miller, John S., Assistant Professor, MS, University of Kentucky, 1988
Moore, Brenda, Instructor, MA, State University of New York at Binghamton, 1988
Morris, Debra R, Professor, BBA, Morehead State University, 1988
Morris, Melanie J, Professor, BSN, University of Kentucky, 1991
Muenks, Martha J, Professor, MA, University of Kentucky, 1993
Napier, Jerry, Assistant Professor, PhD, University of Kentucky, 1997
Noble, Wendy, Associate Professor, MA, Morehead State University, 2009

Nolder, Deborah B, Professor, MSN, Northern Kentucky University, 2005
Ouderkirk, Jennifer, Instructor, AAS, Maysville Community and Technical College, 2011
Parker, Sally, Associate Professor, BSN, College of Mt Saint Joseph on the Ohio, 1979
Pasley, Terry L, Professor, MA, Northern Kentucky University, 1998
Pecco, Nicholas, Associate Professor, BS Morehead State University, 2005
Pemberton, Michael P, Assistant Professor, MS, University of Missouri – Columbia, 2009
Perkins, Brandin, Professor, MS, Morehead State University, 2005
Porter, Matt, Instructor, AAS, Maysville Community and Technical College, 2010
Redden, Carla S, Assistant Professor/Librarian IV, MLS, University of Kentucky, 2009
Reeder, Diana L, Associate Professor, AAS, Morehead State University, 1979
Sears, Christopher M, Associate Professor, PhD, University of Wisconsin-Milwaukee, 2007
Sharp, Mary J, Professor, MS, Morehead State University, 1994
Sims, Rhonda Y, Professor, MSN, Walden University, 2007
Slone-Crumbie, Donna, Associate Professor, MA, University of Kentucky, 2008
Smallwood, Sandra, Instructor, MA, Morehead State University, 1992
Staviski, Sharon, Instructor, BS, Northern Kentucky University, 1990
Swartz, Dennis Ray, Associate Professor, BS, Morehead State University, 2007
Taylor, Carrie L, Associate Professor, MA, Northern Kentucky University, 2009
Thornberry, Tara C, Professor, MBA, Morehead State University, 1984
Thoroughman, Michelle, Instructor, BS, University of Kentucky, 2002
Vice, Marlene K, Professor, AA, Morehead State University, 2001
Walker, Melinda F, Associate Professor, MA, Morehead State University, 2004
Wallace, Tony L, Professor, BS, Morehead State University, 2007
Ward, Russell C, Professor, MA, Morehead State University, 1989
Watson, Megan, Assistant Professor, Certified Cosmetology Instructor Salon Professional Academy, 2010
Weiss, Justin A, Associate Professor, MS, Marshall University, 2009
Whitten, Brianna C, Assistant Professor, MA, Georgetown College, 2004
Williams, James T, Instructor, DVM, University of Tennessee, 1993
Wilson, Sharon G, Professor, MS, Auburn University, 1985
Wylie, Jeff B, Professor, MA, Morehead State University, 1977
Zemba, Patrick, Instructor, AAS, Columbus State Community College, 1991

Correctional Campuses

Eastern Kentucky Branch Campus*

Cantrell, Roger Allen, Assistant Professor, Diploma, Rowan Technical College, 1990
Cloud, Chalmer L, Professor, MS, Morehead State University, 1993
Cole, Carla A, Professor, MA, Morehead State University, 1996
Litteral, Holli H, Professor, MA, Morehead State University, 1999

**Note: HB 164 passed during the 2010 Kentucky General Assembly transferred management oversight and responsibility for Corrections Education programs to the Department of Corrections, effective July 1, 2010. Some faculty listed could have elected to transfer to the Department of Corrections.*

Owensboro Community and Technical College

Mission Statement/Status of Accreditation

To cultivate lifelong learning opportunities through career degree programs, workforce and community development, and transfer-to-baccalaureate degree programs.

Owensboro Community and Technical College, a member of the Kentucky Community and Technical College System, is a public two-year degree granting institution serving the Daviess and surrounding counties of Kentucky.

Owensboro Community and Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Owensboro Community and Technical College.

Note: The Commission to be contacted only if there is evidence that appears to support an institution's significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula

Associate in Arts
Associate in Science

Transfer Curricula/Art Related

An Associate in Fine Arts (AFA) degree is designed to transfer into a Baccalaureate of Fine Arts (BFA) program at a four-year institution. Individual Associate in Fine Arts (A) degree curricula in each group is noted by an A in parenthesis.

Theatre (A)
Visual Art (A)

Occupational/Technical Curricula

Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

Advanced Nursing Assistant (C)
Agricultural Studies (D, A)
Air Conditioning Technology (C, D)
Automotive Technology (C, D, A)
Business Communication (C)
Business Studies:
- Administrative Office Technology (C, A)
- Business Administration Systems (C, D, A)
- Medical Information Technology (C, A)

Computer and Information Technologies (C, A)
Computerized Manufacturing and Machining (C, D, A)
Criminal Justice (C, A)
Diesel Technology (C, D, A)
Emergency Medical Services – Paramedic (C, A)
Emergency Medical Technician (C)
Engineering and Electronics Technology (C, D, A)
Engineering Related: Project Lead the Way (C)
Financial and Customer Service (C)
Fire/Rescue Science Technology (C, D, A)
General Occupational/Technical Studies (A)
Healthcare Facilities Leadership (A)
Human Services (C, A)
Interdisciplinary Early Childhood Education (C, D, A)
Manufacturing Industrial Technology:
- Electrical Technology (C, D, A)

Industrial Maintenance Technology (C, D, A)
Medicaid Nurse Aide (C)
Nursing (A)
Pharmacy Technology (C)
Radiography (C, A)
Surgical Technology (C, A)
Technical Theatre (C)
Veterinary Technology (A)
Welding Technology (C, D, A)

Contact Information

Owensboro Community & Technical College
4800 New Hartford Road
Owensboro, KY 42303
(270) 686-4400
Toll Free 1 (866) 755-OCTC
owensboro.kctcs.edu

OCTC Downtown Campus
1501 Frederica Street
Owensboro, KY 42301
(270) 686-4444

OCTC Southeastern Campus
1901 Southeastern Parkway
Owensboro, KY 42303
(270) 686-4488

General Information

Admissions	(270) 686-4527
Business Office	1-855-5GO-OCTC (1-855-546-6282)
Workforce Solutions	(270) 686-4444
Continuing Education	(270) 686-4449
Disability Services	(270) 686-4528
Financial Aid	1-855-5GO-OCTC (1-855-546-6282)
Human Resources	(270) 686-4442
Library	(270) 686-4590
Marketing and Communications	(270) 686-4506
Records	(270) 686-4539
Transfer Center Liaison	(270) 686-4529
Veterans Affairs	(270) 686-4631
Website	(270) 686-4570

Administration

President	Scott Williams, PhD.
Interim Vice President of Academic Affairs	Michael Rodgers
Vice President of Business Affairs	Sarah Price
Vice President of Information Technology	James Hartz
Vice President of Student Affairs	Kevin Beardmore
Vice President of Workforce Solutions	Cynthia Fiorella
Associate Dean of Academic Affairs	Stacy Edds-Ellis, PhD
Associate Dean of Business Affairs	Rhonda Logsdon
Associate Dean of Nursing	Terri Lanham, RN, MSN
Associate Dean of Advanced Manufacturing Technologies	Aubrey D. Autry
Associate Dean of Humanities and Fine Arts	Julia Ledford, PhD
Associate Dean of Social Sciences, Business and Public Service	Marc Maltby, PhD
Associate Dean of Personal Services and Skill Trades	Aubrey D. Autry
Associate Dean of Mathematics, Science, and Allied Health	Veena Sallan, PhD
Associate Dean of Student Affairs, Registrar	Sandra A. Carden
Associate Dean of Student Affairs, Cultural Diversity	Lewatis McNeal, PhD
Director of Marketing & Communications	Bernadette Toye Hale
Director of Public Safety	Jeff Williams
Director of Southeastern Campus	Mike Rogers

Faculty

Abell, Donna, Associate Professor, MS, Florida State University, 2004
Alschbach, Matthew, Assistant Professor, MA, San Diego State University, 2008
Arnold, Julia, Instructor, MS, University of Evansville, 1997
Ash, Angela, Assistant Professor, MA, University of Louisville, 2005
Bailes, Steven R, Professor, BS, Eastern Kentucky University, 1977
Basham-Edge, Zara, Associate Professor, AAS, Owensboro Community and Technical College, 2013
Boarman, Keith, Associate Professor, Murray State University, 1999
Booker, Connie, Assistant Professor, MA, Western Kentucky University, 1997
Bowlds, Barry K, Associate Professor, AAS, Western Kentucky University, 2003
Boyd, Michael, Professor, MBA, Southwest Missouri State University, 1987
Boyd, Vicki H, Professor, MA, Murray State University, 1981
Branham, Matthew, Professor, MA, Morehead State University, 2000
Brown, Kathryn, Associate Professor, MA, Western Kentucky University, 1994
Canales, Michael, Instructor, BS, DeVry University, 1987
Caplan, Geralyn M, Professor, MS, University of Illinois, 1984
Collins, Shannon Quinette, Professor, MA, Morehead State University, 2000
Crowe, Randy Keith, Professor, BS, Western Kentucky University, 1999
Curtis-Abuonk, Vickie L, Associate Professor, MS, Western Kentucky University, 1984
DePasquale, Donna, Assistant Professor, MS, Western Kentucky University, 2013
Dick, Timothy T, Professor, PhD, University of Kentucky, 2002
Donahoo, Lori, Assistant Professor, MSN, Western Kentucky University, 2013
Ebelhar, Bethany, Associate Professor, BSN, Murray State University, 2000
Edwards, Lois M, Associate Professor, MAE, Western Kentucky University, 2002
Ford, Constance R, Professor, DME, Indiana University, 1983
Gesser, Chad, Associate Professor, MA, Western Kentucky University, 1997
Gibson, Molly, Assistant Professor, MPA, Western Kentucky University, 2008
Gish, Misty, Associate Professor, MS, Murray State University, 2001
Glenn III, Robert J, Professor, MA, University of Nevada Las Vegas, 1985
Glenn, James H, Professor, EdD, University of Kentucky, 2001
Gore, Michael G, Professor, BS, Western Kentucky University, 2009
Hall, Teresa, Assistant Professor, BSN, Western Kentucky University, 1997
Hamilton, Cassandra, Associate Professor, MA, Western Kentucky University, 2003
Hammonds, Gary S, Associate Professor, AAT, Institute of Electronic Technology, 1986
Head Jr, Gerald M, Assistant Professor, MS, Western Kentucky University, 1995
Helm, Monty J, Assistant Professor, MFA, Southern Illinois University - Carbondale, 1988
Higdon, Frances, Assistant Professor, AAS, Owensboro Community and Technical College, 2011
Hildenbrandt, Daniel R, Associate Professor, MA, Southern Illinois University - Carbondale, 1982
Hoffman, Kathy, Assistant Professor, MS, Catholic University of America, 1986
Hollman, Stephen F, Professor, BS, Murray State University, 1999
Howard, Jacqueline, Assistant Professor, BS, Murray State University, 2009
James, Walter, Assistant Professor, Nashville Auto-Diesel College, 1993
Johnson, Connie F., Associate Professor, MBA, Morehead State University, 2006
Johnson, James L, Professor, MA, Western Kentucky University, 1987, M.A. University of Kentucky, 1998
Kobella, Peter, Associate Professor, MA, Matej Bel University, 1998
Layman, Janet S, Assistant Professor, AAS, Madisonville Community College, 1993
Leach, Eddie, Instructor, DVM, Auburn University, 1984
Lewis, Courtland, Assistant Professor, PhD, University of Tennessee, 2012
Lutzel, John, Associate Professor/Librarian IV, MLS, University of Southern Mississippi, 2004
Martin, David C, Professor, MS, Western Kentucky University, 2007
McCrary, Lauren, Instructor, MPA, Western Kentucky University, 2012
McDonough, Greta J, Professor, MSSW, Western Kentucky University, 1978
McGee, Jennifer S, Associate Professor, BSN, Western Kentucky University, 1996
Menser, Nadine Joyce, Associate Professor, EdD, Western Kentucky University, 2015
Miller, Clyde A, Instructor, 20 years teaching experience, 13 years occupational experience
Monsour, Matthew, Instructor, MA, Saint Meinrad School of Theology, 2010
Morris, Edward J, Professor, PhD, Southern Illinois University, 1989
Morris, Kelly, Associate Professor, PhD, University of Kentucky, 2009
Moseley, Daniel Joe, Professor, BS, Western Kentucky University, 2008
Mowers, Kathleen A, Professor, MAT, Indiana University, 1975
Mundell, Donald W, Associate Professor, MS, Eastern Illinois University, 1976
Nall, Keith Lewis, Assistant Professor, AS, Nashville Automotive Diesel College, 1986
Northenor, Tonya, Associate Professor, MFA, University of Memphis, 1999
Obilade, Anthony, Associate Professor, PhD, Southern Illinois University, 2001
Payne, Justin, Associate Professor, AAS, Owensboro Community and Technical College, 2005
Payne, Shawn, Associate Professor AAS, Owensboro Community and Technical College, 2007
Perkins, Micah W, Associate Professor, MS, University of Nebraska, 2001
Purdy, Cheryl A., Associate Professor BS, Kentucky Wesleyan College, 1976
Purdy, Robert, Associate Professor, MPS, Western Kentucky University, 1983
Revlett, Kimberly, Instructor, ADN, Kentucky Wesleyan College, 2000
Rice, Tammy M, Associate Professor, MA, Western Kentucky University, 1984
Runyon, Carl R, Associate Professor, MA, University of Evansville, 1973
Ruth, Deborah L, Associate Professor, MA, Western Kentucky University, 1993
Schmitt, Theresa M, Professor, MBA, University of Akron, 1992
Skaggs, Meredith, Associate Professor, PhD, EdD, Western Kentucky University, 2015
Stone, Larry G, Instructor, Diploma, Owensboro Community and Technical College, 2005
Swanson, Susan, Associate Professor MA, Western Kentucky University, 2007
Taylor, Eunice K, Associate Professor, PhD, Southern Illinois University, 1997
Tudor, Michelle G, Associate Professor, AAS, Owensboro Community College, 2000
Wallace, Albert F, Professor, MBA, Xavier University, 1978
Ward, Lorene J, Associate Professor, MS, Western Kentucky University, 1972
Wetzel, William F, Professor, PhD, Southern Illinois University - Carbondale, 1987
Williams, Chelsea, Assistant Professor, MS, Western Kentucky University, 2011
Wilson, Pamela S, Associate Professor, MA, Southern Illinois University - Edwardsville, 1995
Wood-Graesla, Vickey A, Associate Professor, AAS, Owensboro Community and Technical College, 2003
Yazvac, Joseph, Professor, EdD, Auburn University, 2002

Somerset Community College

Mission Statement/Status of Accreditation

The mission of Somerset Community College is to improve the employability and quality of life of area citizens as the primary provider of:

- College and Workforce Readiness
- Transfer Education
- Workforce Education and Training
- Associated Student Support Services

Somerset Community College, a member of the Kentucky Community and Technical College System, is a public associate degree granting institution serving the south central region of Kentucky.

Somerset Community College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Somerset Community College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution's significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula

- Associate in Arts
- Associate in Science

Occupational/Technical Curricula

Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

Air Conditioning Technology (C, D)
Auto Body/Collision Repair Technology (C, D)
Automotive Technology (C, D)
Aviation Maintenance Technology (C, D, A)
Business Studies:
  Business Administration Systems
  Medical Information Technology (C, D, A)
Certified Medical Technician (C)
Computer and Information Technologies (C, A)
Computerized Manufacturing and Machining (C, D)
Construction Technology (C, D)
Cosmetology (C, D)
Criminal Justice (C, A)
Culinary Arts (C, D, A)
Diesel Technology (C, D)
Digital Printing Technology (C)
Emergency Medical Services– Paramedic (C, A)
Emergency Medical Technician (C)
Engineering and Electronics Technology (C, A)
Fire/Rescue Science Technology (C, D, A)
General Occupational/Technical Studies (A)
Interdisciplinary Early Childhood Education (C, D, A)
Manufacturing Industrial Technology:
  Electrical Technology (C, D)
  Industrial Maintenance Technology (C, D, A)
Masonry (C)
Medical Assisting (C, D)
Medical Laboratory Technology (C, A)
Multi-skilled Systems Technician (C)
Natural Gas Technology (C)
Nursing (A)
Pharmacy Technology (C, D)
Physical Therapist Assistant (A)
Practical Nursing (C, D)
Radiography (C, A)
Respiratory Care (A)
Surgical Technology (C, A)
Truck Driving Training (C)
Visual Communication:
  Design & Technology (C)
  Multimedia (C, D, A)
  Printing (C, D)
Welding Technology (C, D)

Contact Information

Somerset Community College

Somerset Campus
808 Monticello St.
Somerset, KY 42501
Toll Free (877) 629-9722 or (606) 679-8501
somerset.kctcs.edu

SCC Laurel Campus
100 University Dr.
London, KY 40741

SCC McCreary Center
250 College St.
Whitley City, KY 42653

SCC Russell Center
848 Steve Wariner Dr.
Russell Springs, KY 42642

SCC Clinton Center
1273 KY Highway 90 W.
Albany, KY 42602

SCC Casey Center
3609 North US 127
Liberty, KY 42539

General Information

General Information	(877) 629-9722
Admissions/Records	(606) 451-6630
Business Office	1-855-66GO-SCC (1-855-664-6722)
Community Workforce and Economic Development	(606) 451-6690
Disability Services	(606) 451-6706
Financial Aid	1-855-66GO-SCC (1-855-664-6722)
Human Resources	(606) 451-6620
Library/Learning Commons	(606) 451-6710
Public Relations	(606) 451-6618
Transfer Center	(606) 451-6650
Veterans Affairs	(606) 451-6640
Website	somerset.kctcs.edu

Administration

President/CEO	Jo Marshall, PhD
Provost	Tony Honeycutt, EdD
Dean of Applied Technology	Roger Angevine
Dean of Student Affairs	Tracy Casada
Dean of Learning Support	Bruce Gover
Dean of Health Sciences	Nancy Powell
Associate Dean of Distance Learning/Learning Support	Linda Bourne
Associate Dean of Humanities, Fine Arts & Social Sciences	Jon Burlew
Associate Dean of Career & Technical	Dan Burnett
Associate Dean of Transitional Education	Kim Cleberg
Associate Dean of Mathematics & Natural Sciences	Clint Hayes, EdD
Associate Dean of Business & Professional Services	Lois McWhorter
Interim Associate Dean of Workforce Solutions	Alesa Johnson
Chief Operations Officer	Larry Abbott
Interim Business Affairs Officer	Jill Meece
Director of Institutional Advancement	Cindy Clouse

Faculty

Abner, Jeffery, Instructor, BS, Eastern Kentucky University, 2015
Allen, Melinda J, Associate Professor, MA, Eastern Kentucky University, 1993
Angevine, Roger L, Professor, MS, University of Illinois, 1969
Armstrong, Anthony L, Professor, MS, University of Texas at Arlington, 1984
Asher, Jason, Associate Professor, MA, Lindsey Wilson College, 2010
Atkinson-Bigelow, Johnna, Professor, MA, University of Kentucky, 1988
Ballard, Linda K, Professor, EdD, Eastern Kentucky University, 2016
Barbalace, Roberta, Assistant Professor, MS, Colorado State University, 1976
Barnes, Kelly J., Associate Professor, MS, Eastern Kentucky University, 2006
Beaty, Frances M, Associate Professor, AS, Eastern Kentucky University, 1986
Behrman, David M, Professor, MS, University of North Carolina-Chapel Hill, 1996
Bentley, Sheila, Instructor, MS, Eastern Kentucky University, 2009
Blevins, Jo Y, Professor, DNP, University of Kentucky, 2010
Bloomingburg, Michael S, Assistant Professor, MA, Eastern Kentucky University, 2005
Bradford, Kevin L, Professor, MBA Wayland Baptist University, 2000
Bradley, Daniel A, Associate Professor, MA, Morehead State University, 2007
Bridgman, Pamela S, Professor, MS, Capitol College, 1999
Brock, Brandy, Associate Professor, BS, Eastern Kentucky University, 2013
Brown, Eddie, Associate Professor, AAS, Somerset Community College, 2003
Broyles, Angela W, Associate Professor, MS, Eastern Kentucky University, 1999
Burlew, Jonathan W, Professor, MS, Fort Hays State University, 1993
Burnett, Daniel C, Professor, MA, Union College, 2007
Burnett, Kippe Brown, Professor, MSN, Eastern Kentucky University, 2000
Burton, Cindy, Associate Professor, BFA, American Intercontinental University, 2009
Byrd, Cynthia G, Instructor, MA, Eastern Kentucky University, 1986
Calcaterra, Carol L, Assistant Professor, MBA, Eastern Kentucky University, 199
Calder, Michael V, Associate Professor, AAS, Somerset Community College, 2000
Carothers, Franklin T, Professor, MBA, Murray State University, 1992
Cash, Curtis F, Professor, MA, Union College, 2007
Catron, Shanda L, Associate Professor, BS, University of Louisville, 2007
Chadwell, Clevern, Associate Professor, AAS, Somerset Community College, 2007
Childress, Margaret L, Associate Professor, MBA, Morehead State University, 2008
Cleberg, Kimberlie S, Associate Professor, MA, Eastern Kentucky University, 2001
Cleberg, Steven F, Professor, MFA, University of Portland, 1982
Coffey, David A, Assistant Professor, BS, Eastern Kentucky University, 2012
Conaway, Vicki L, Professor, MSN, University of Kentucky, 1984
Copenhaver, Brandi Wilson, Professor, MS, Eastern Kentucky University, 2001
Cunningham, Gary, Associate Professor, EdD, Texas A&M University, 2006
Deaton, Eric D, Assistant Professor, MS, Eastern Kentucky University, 1997
DeBord, Lenora Frances, Professor, MSN, Eastern Kentucky University, 2002
Decker, Doyle, Assistant Professor, MA, California State University, 2010
Dobbs, Billy W, Associate Professor, MS, University of Kentucky, 1994
Duvall, Billie, Associate Professor, MSN, Eastern Kentucky University, 2012
Eastham, Donna S, Professor, M.A. Ed, Western Kentucky University, 1994
Elam, Debra L, Associate Professor, AAS, Somerset Community College, 2005
Farmer, Adam, Instructor, BS, Berea College, 2004
Feldman, Samantha, Instructor, BS, Eastern Kentucky University, 2004
Flanary, Randall, Professor, BS, Eastern Kentucky University, 2011
Franklin, Tracey, Instructor, BA, Midway College, 2014
Fries, Dennis, Assistant Professor, MS, Eastern Kentucky University, 2003
Fries, Wanda F, Professor, MFA, Bennington College, 1986
Gadd, Belinda P, Associate Professor, MA, Eastern Kentucky University, 2002
Gadd, Susan G, Professor, MS, University of Kentucky, 1989
Gammage, Simeon D., Associate Professor, AAS, Somerset Community College, 2010
Gaskin, Tom P, Associate Professor, MS, Eastern Kentucky University, 2007
Goleman, Michael J, Assistant Professor, PhD, Mississippi State University, 2010
Gover, Glen B, Professor, MS, Eastern Kentucky University, 2003
Graham, Gerald M, Associate Professor, AAS, Somerset Technical College, 2000
Grover, Alyce A, Professor, MA, Southwest Missouri State University, 1989
Hammons, John S, Professor, DPT, Shenandoah University, 2006
Harris, James Ricky, Assistant Professor, AAS, Somerset Community College, 2007
Harris, Jeffrey D, Professor, MA, Eastern Kentucky University, 1998
Hayes, Clinton R, Instructor, EdD, University of the Cumberlands, 2011
Hewitt, John, Assistant Professor, BSN, Bellarmine University, 1996
Hickman, Shannon M, Associate Professor, BA, Lincoln Memorial University, 2008
Hoskins, Jess, Associate Professor, BA, Eastern Kentucky University, 1975
House, Debra J, Professor, MS, University of Kentucky, 1994
Howe, Julie M, Assistant Professor, MLS, University of Kentucky, 2010
Huffaker, Lorna S, Professor, MSN, Eastern Kentucky University, 2003
Huntsman, Mary Taylor, Professor/Librarian, MA/MLS, University of Kentucky, 1994
Isham, Mark, Associate Professor, MS, Eastern Kentucky University, 1992
Jacques, Kenneth R, Professor, MBA, Ball State University, 1987
Johnson, Kelly, Assistant Professor, MA, Eastern Kentucky University, 2003
Jones, Rebecca, Instructor, AAS, Somerset Community College, 2011
Karim, Md Jahurul, Associate Professor, DVM, Bangladesh Agricultural University, 1977
Kilgore, April L, Professor, PhD, University of Kentucky, 1994
Kohrman, Elaine E, Associate Professor, MS, University of Cincinnati, 1990
Krause, Richard, Professor, MA, University of Kansas, 1969
Land, Kimberly, Instructor, AAS, Temple College, 1999
Larason, Irene J, Associate Professor, MA, National University, 2010
Lester, Danny L, Associate Professor, AAS, Somerset Technical College, 2002
Lewis, Kathy S, Professor, MS, Eastern Kentucky University, 1994
Logan, Donna L, Professor, MA, Eastern Kentucky University, 1997
Mace, Ronald W, Assistant Professor, MA, Morehead State University, 1984
Martin, Ruth S, Professor, MSN, Eastern Kentucky University, 1999
Martinez, George M, Associate Professor, MS, Murray State University, 1991
Matika, Richard S, Associate Professor, EdD, University of Kentucky, 2012
McClendon, Steven S, Assistant Professor Instructor, EdD, University of the Cumberlands, 2012
McFeeters, James L, Associate Professor, MS, Louisiana State University, 1991
McQueen, Travis, Professor, MS, Eastern Kentucky University, 2001
McWhorter, Lois A, Professor, MBA, Eastern Kentucky University, 1988
Meade, Ronald L, Professor, DPT, Shenandoah University, 2006
Metcalf, Virginia E, Associate Professor, MS, Eastern Kentucky University, 2002
Mills, Angela N, Assistant Professor, BS, Northern Kentucky University, 2012
Mills, Craylon T, Associate Professor, PhD, Capella University, 2015
Moran, Phillip D, Assistant Professor, AAT, Somerset Technical College, 2002
Morris, Amanda K, Associate Professor, MA, University of Kentucky, 2009
Muse, Dana, Professor, MS, University of Kentucky, 1998
Nazario, Eduardo, Assistant Professor, AS, Sullivan University, 2005
Null, George Curtis, Assistant Professor, AA, Trinity Valley Community College, 1967
Oakes, Chelsea, Instructor, MSN, Eastern Kentucky University, 2014
Osborne, Roger, Associate Professor, MA, University of Louisville, 2002
Owens, Jennifer, Associate Professor, AAS, Somerset Community College, 2008
Perkins, Jeffrey H, Professor, MA, Eastern Kentucky University, 1993
Peterson, Betty W, Professor, MA, University of Kentucky, 1986
Phelps, David A, Associate Professor, AAS, Somerset Technical College, 2000
Phelps, Devin, Assistant Professor, MSLS, University of Kentucky, 2011
Phillips, Christopher M, Professor, EdD, University of Kentucky, 2011
Pierce, Christopher A, Associate Professor, BS, University of Kentucky, 2003
Powell, Nancy L, Professor, M.A.Ed., Eastern Kentucky University, 1987
Price, Carol A, Associate Professor, BSN, Eastern Kentucky University, 1995
Ramilo, Cecilia A, Associate Professor, PhD, Washington State University, 1996
Randall, Marci S, Associate Professor, MS, Eastern Kentucky University, 2011

Ratliff, Donna R, Professor, M.A. Ed, Eastern Kentucky University, 1999
Roberts, Laura E, Associate Professor, BSN, Eastern Kentucky University, 1991
Robertson, Elwanda, Assistant Professor, MSN, Murray State University, 2000
Routt, Patricia L, Assistant Professor, BSN, Eastern Kentucky University, 2013
Shearer, Elizabeth, Professor, MA, Western Kentucky University, 1988
Shelton, Billie J, Associate Professor, MSN, Western Kentucky University, 2008
Sherman, Gary J, Professor, MS, University of Wyoming, 1979
Sherman, Loris E, Professor, MS, University of Wyoming, 1985
Simpson, William Stuart, Professor, MS, Eastern Kentucky University, 2004
Smith, Jimmy R, Associate Professor, AAS, Eastern Kentucky University, 1999
Spencer, Robert T, Professor, MA, Eastern Kentucky University, 1993
Starnes, John H, Associate Professor, Ph.D., University of Kentucky, 2013
Stephens, Erin, Associate Professor, MA, Eastern Kentucky University, 2007
Story, Joanne, Professor, MA, Eastern Kentucky University, 1969
Stringer, Gail S, Professor, MS, Eastern Kentucky University, 1989
Swanner, Regina K, Professor, BS, Eastern Kentucky University, 2007
Taylor, Gary B, Assistant Professor, AAS, Somerset Technical College, 2000
Taylor, Guy L, Instructor, BS, University of Kentucky, 1981
Taylor, James H, Assistant Professor, MA, Eastern Kentucky University, 2002
Thomas, Janice E, Assistant Professor, MSN, Eastern Kentucky University, 2008
Tincher, James E, Assistant Professor, AAS, Somerset Technical College, 2000
Toby, Kimberly L, Associate Professor, MS, University of Kentucky, 1998
Tomlinson, James R, Professor, MS, Eastern Kentucky University, 1995
Tomlinson, Nick, Professor, MS, Eastern Kentucky University, 2006
Upchurch, Joni M, Associate Professor, AAS, Somerset Community College, 2008
Vito, Gloria L, Associate Professor, MSN, Eastern Kentucky University, 2006
Ware, Lisa N, Associate Professor, MA, Eastern Kentucky University, 2010
Waterstrat, Amanda J., Associate Professor, PhD, University of Kentucky, 2009
Watson, Karl D, Professor, BS, Eastern Kentucky University, 2002
Watters, Tammy R, Associate Professor, AAS, Somerset Community College, 2000
Webb, Karen Calvert, Professor, BS, Eastern Kentucky University, 1998
Wells, Michael, Assistant Professor, BS, Indiana Wesleyan University, 2013
Wheet, Dee, Instructor, ASN, Eastern Kentucky University, 1993
Wilson, Jennifer K, Professor, MSN, Eastern Kentucky University, 2000
Wooldridge, Eric N, Associate Professor, BS, University of Kentucky, 2001
Xia, Zhiming, Associate Professor, MS, University of Mississippi, 1999

Southcentral Kentucky Community and Technical College

Mission Statement/Status of Accreditation

The mission of Southcentral Kentucky Community and Technical College is to improve the employability and quality of life of south central Kentucky citizens as the primary provider of:

- Certificate, diploma, associate degree, and collegiate transfer programs.
- College and workforce readiness.
- Workforce education and training.
- Adult education and family literacy.

Southcentral Kentucky Community and Technical College, a member of the Kentucky Community and Technical College System, is a public two-year degree granting institution serving the south central region of Kentucky.

Southcentral Kentucky Community and Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Southcentral Kentucky Community and Technical College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution's significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula

Associate in Arts
Associate in Science

Occupational/Technical Curricula

Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

Air Conditioning Technology (C, D, A)
Auto Body/Collision Repair Technology (C, D)
Automotive Technology (C, D, A)
Business Studies:
  Business Administration Systems (C, D, A)
  Medical Information Technology (C, D, A)
Computer and Information Technologies (C, A)
Computerized Manufacturing and Machining (C, D, A)
Culinary Arts (C, D, A)
Diagnostic Medical Sonography (C, A)
Emergency Medical Technician (C)
Engineering and Electronics Technology (C, D, A)
Fire/Rescue Science Technology (C, D, A)
General Occupational/Technical Studies (A)
Manufacturing Industrial Technology:
  Electrical Technology (C, D, A)
  Industrial Maintenance Technology (C, D, A)
Medical Administrative Services (C)
Nursing (A)
Practical Nursing (C, D)
Paramedic Technology (C)
Radiography (A)
Respiratory Care (A)
Surgical Technology (A)
Welding Technology (C, D, A)

Contact Information

Southcentral Kentucky Community and Technical College
1845 Loop Drive
Bowling Green, KY 42101
Main Campus (270) 901-1000
southcentral.kctcs.edu

Off Site Locations

Glasgow Campus
129 State Avenue
Glasgow, KY 42141
(270) 901-1200 & (270) 651-5673

Glasgow Technology Campus
500 Hilltopper Way
Glasgow, KY 42141
(270) 659-6900

Kentucky Advanced Technology Institute
1127 Morgantown Road
Bowling Green, KY 42101
(270) 901-1150

Transpark Center
221 Commonwealth Blvd
Bowling Green, KY 42101
(270) 901-1225

Franklin-Simpson Center
175 Davis Drive
Franklin, KY 42134
(270) 901-1119

General Information

Admissions (270) 901-1094	Denna White
Adult Education & Literacy (270) 901-1013	Brian Becker
Business Office 1-855 246-2482	Chris Cumens
Workforce Solutions (270) 901-1033	Dr. James McCaslin
Assessment & Testing (270) 901-1036	Elaine Yates
Disability Services (270) 901-1202	Pam Bulle
Financial Aid 1-855-246-2482	Jennifer Wells
Human Resources (270) 901-1115	Sherri Forester
Institutional Advancement (270) 901-1116	Heather Rogers
Library (270) 901-1155	Janice Gabbard
Public Relations (270) 901-1117	Mark Brooks

Records (270) 901-1001	Amy Cannon
Transfer Information Liaison (270) 901-1001	Brooke Justice
Veterans Affairs (270) 901-1003	Tim Lutenski
Website (270) 901-1160	Josh Henderson

Administration

President	Dr. Phillip Neal
Provost	Dr. Maggie Shelton
Interim Vice President of Student and Organizational Success	Brooke Justice
Vice President of -Finance and Administration	Chris Cumens
Vice President of Outreach and Community Development	Dr. James McCaslin
Executive Director of SKYCTC Foundation & Associate Vice President of Advancement	Heather Rogers
Director of Human Resources	Sherri Forester
Deans	
Arts and Humanities	Dr. Tonya Daniels
Applied Technology	Gene Basil
Allied Health and Nursing and Director, Glasgow Campus	Dr. Jimmy Isenberg
Mathematics and Sciences	Kevin Kenady
Engineering and Machine Tool Technology	Gene Basil
Business	Lisa Hunt

Faculty

Adams, Elizabeth C. Assistant Professor, MA, Western Kentucky University, 2012
Adams, Jessica L, Assistant Professor, MS, Murray State University, 2001
Ariyawansa, Chandana, Assistant Professor, MS, University of Peradeniya, 2002
Atwell, Sheila D, Assistant Professor, MSN, Western Kentucky University, 2005
Barron, Kristine D., Instructor, MBA, The University of Texas at Dallas, 2013
Bayer, Jessica, Assistant Professor, MS, Southern Illinois University, 2007
Banks, Deborah P, Instructor, MA, Western Kentucky University, 2006
Beagle, Gary W, Associate Professor, MA, Western Kentucky University, 1995
Bourque, Brittany, Assistant Professor, BSN, Western Kentucky University, 2005
Bradford, Joshua, Assistant Professor, BS, Western Kentucky University, 2006
Bronson Jr, James P, Professor, BS, Madison University, 2002
Case, Joseph C, Instructor, MA, Trevecca Nazarene University, 2011
Crews, Debra, Assistant Professor, AS, Western Kentucky University, 1997
Combs, Rex Allen, Professor, MS, Western Kentucky University, 2014
Conner, Rebecca E, Assistant Professor, Ph.D. Texas Woman's University, 1996
Dolby, Phetsamone Om, Instructor, BS, Western Kentucky University, 1999
Doyle, Janel C, Professor, MA, Western Kentucky University, 2015
Ellis, Claudean, Assistant Professor, MA, Nova Southeastern University, 2005
Faine, John B, Assistant Professor, MS, Northern Kentucky University, 2006
Finley, Joseph Lynn, Associate Professor, MS, University of Kentucky, 2002
French, Esther G, Instructor, MA, University of Southern Mississippi, 2005
Florence, Christina, M, Assistant Professor, MA, Western Kentucky University, 2012
Fuller, Mary M, Professor, BS, Western Kentucky University, 2000
Galloway, Angela M, Assistant Professor, MS, University of Kentucky, 2005
Gaskins, Carmen C, Professor, MS, Western Kentucky University, 1994
Gentry, Traci, Associate Professor, MSN, Western Kentucky University, 2011
Greer, Michael, Associate Professor, AA, Bowling Green Technical College, 2012
Hagan, Chris A, Instructor, AS, Southcentral Community and Technical College 2016
Harlan, Angela K, Professor, MSN, Western Kentucky University, 2007
Harris, Myria, D, Assistant Professor, MA, Chamberlain College of Nursing, 2013
Hatcher, Steve A, Professor, BS, Western Kentucky University, 2011
Hook, Margaret, R, Assistant Professor, MA, Western Kentucky University, 2012
Houchens, Charles D, Associate Professor, MS, Western Kentucky University, 2009
Hunt, Jon D, Associate Professor, AAS, Bowling Green Technical College, 2006
Jeter, Christopher N, Assistant Professor, BIS, Western Kentucky University, 2009
Jones, Charles D, Assistant Professor, MA, Savannah College of Art and Design, 1990
Kennedy, Barry A, Associate Professor, MA, Western Kentucky University, 2003
Konneh, Davidetta E, Instructor, Ph.D, University of Liberia, 1989
LeFevre, Kathryne A. Assistant Professor, MS, University of Kentucky, 2007
Lindsey, Jason E, Instructor , AAS, Southcentral Kentucky Community and Technical College, 2012
Lindsey, John L, Associate Professor, BS, ITT Technical Institute – Indianapolis, 1993
McKenney, Ken D, Assistant Professor, , BS, Western Kentucky University, 2014
Moore, Wendy B., Assistant Professor, MSN, Western Kentucky University, 2006
Moorman, John K, Assistant Professor, BS, Western Kentucky University, 1977
Mullally, Aaron T. -Assistant Professor, MA, The College of Saint Scholastica, 2007
Murphy, Terrell W, Associate Professor, AS, Western Kentucky University, 1993
Norrod, Amy Paige, Assistant Professor, BS, Mid-Continent University, 2008
Otto, Kimberly D, Associate Professor, MA, Western Kentucky University, 2006
Palmer, Jahi M., Instructor, MS, Western Kentucky University, 2014
Papalouca, Loucas, Associate Professor, MS, Western Kentucky University, 1989
Patel, Virendrakumar Anikumar, Assistant Professor, MA, Eastern Kentucky University, 2010
Pennycuff II, Donald B, Associate Professor, MS, Western Kentucky University, 2007
Phelps, Jeffery W, Professor, BS, Western Kentucky University, 2000
Poteet, Bruce D., Instructor, MA, Western Kentucky University, 2004
Proffitt, Jessica, F, Assistant Professor, BSN, Western Kentucky University, 2012
Riggs, Michael W, Professor, Ed.D, University of Louisville, 2009
Royse, Christopher L, Assistant Professor, BS, Murray State University, 2004
Sandefur, Ryan, P, Associate Professor, MS, Western Kentucky University, 2004
Shive, April, Associate Professor, MSN, Western Kentucky University, 2011
Shoemake, Jennifer J, Professor, MSN, Western Kentucky University, 2005
Slaughter, Lori A, Professor, MA, Western Kentucky University, 2010
Smith, Shellena R, Assistant Professor, MA, Eastern Kentucky University, 2011
Sparks, Richard B, Associate Professor, BS, University of Kentucky, 2003
Stagner, Phillip W, Assistant Professor, MA, 2004, Webster University, 2004
Stephens, Jeremy, D, Assistant Professor, AAS, Bowling Green Technical College, 2010
Tackett, Kristina, Assistant Professor, MS, Western Kentucky University, 2009
Taylor, Maria, A, Assistant Professor, MA, University of Louisville, 2007
Taylor, Michael O, Professor, BA, Western Kentucky University, 1972
Trivett, Darrell S., Instructor, AS, Western Kentucky University, 2011
Turner, James R, Instructor, MA, Western Kentucky University, 1972
Turner, Kerry S, Associate Professor, AAS, Bowling Green Technical College, 2008
Varney, Bertena, -Assistant Professor, MA, Morehead State University, 1998
Waggoner, Constance, J, Associate Professor, MS, Capella University, 2009
Ward, Teresa Y, Assistant Professor, MS, Troy University, 1983
Wendt, Leah D, Assistant Professor, MA, California State Polytechnic University, 2008
West, Jared, D., Instructor, AAS, Southcentral Kentucky Community and Technical College, 2006
White, Renee, Assistant Professor, Ph.D, University of Louisville, 2003
Williams, Thomas W, Associate Professor, MA, Western Kentucky University, 2007
Wilkins, Diane A, Professor, MA, University of Kentucky, 1999
Young, Lisa, Instructor, MA, Western Kentucky University, 1987
Youngquist, Sherry W, Instructor, MA, Western Kentucky University, 1997

Southeast Kentucky Community and Technical College

Mission Statement/Status of Accreditation

Founded in 1960, Southeast Kentucky Community and Technical College is a public, comprehensive community and technical college under the governance of the Kentucky Community and Technical College System (KCTCS). The college serves the southeastern Kentucky region and provides:

- Associate in Arts and Associate in Science degree programs and courses designed to prepare individuals to succeed in baccalaureate programs at senior colleges and universities;
- Associate in Applied Science degree programs, certificates programs, diploma programs and courses designed to prepare individuals to succeed in today's technological workforce;
- Continuing education, training activities and services designed to expand life skills and knowledge of our citizens, strengthen the existing workforce, and enhance community and business development;
- Academic support and developmental education courses and experiences designed to prepare individuals for success in transfer, technical, and continuing education programs and courses; and
- Resources to promote the preservation of Appalachian culture by stimulating artistic expressions, serving as a depository for the region's history and cultural traditions, providing a forum for the arts through cross-cultural experiences, and promoting the arts in education.

Southeast Kentucky Community and Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Southeast Kentucky Community and Technical College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution's significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula

Associate in Arts
Associate in Science

Occupational/Technical Curricula

Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

Air Conditioning Technology (C, D)
Appalachian Studies (C)
Auto Body/Collision Repair Technology (C, D)
Automotive Technology (C, D)
Business Communications (C)
Business Foundations (C)
Business Studies:
  Business Administration Systems (C, A)
  Medical Information Technology (C, D)
Computer Aided Drafting and Design (C, D)
Computer and Information Technologies (C, A)
Computerized Manufacturing and Machining (C, D)
Construction Technology (C, D)
Criminal Justice (C, A)
Diesel Technology (C, D, A)
Education (A)
Emergency Medical Services – Paramedic (C)
Emergency Medical Technician (C)
Engineering Related – Project Lead the Way (PLTW) (C)
Engineering and Electronics Technology (C, D)
General Occupational/Technical Studies (A)
Heavy Equipment Operation (C, D)
Interdisciplinary Early Childhood Education (C)
Manufacturing Industrial Technology:
  Electrical Technology (C, D)
  Industrial Maintenance Technology (C, D)
Medical Assisting (C, D)
Medical Laboratory Technology (C, A)
Mining Technology (C)
Nursing (A)
Physical Therapist Assistant (A)
Practical Nursing (C)
Professional Craft: Pottery (C)
Radiography (C, A)
Respiratory Care (A)
Surgical Technology (D, A)
Surveying & Mapping Technology (C)
Welding Technology (C, D)
Workplace Safety Specialist (C)

Contact Information

Southeast Kentucky Community and Technical College
700 College Road
Cumberland, KY 40823
(606) 589-2145
southeast.kctcs.edu

Harlan Campus
164 Ball Park Road
Harlan, KY 40831
(606) 573-1506

Middlesboro Campus
1300 Chichester Avenue
Middlesboro, KY 40965
(606) 242-2145

Pineville Campus
10350 South US 25E
Pineville, KY 40977
(606) 337-3106

Whitesburg Campus
2 Long Avenue
Whitesburg, KY 41858
(606) 633-0279

General Information

Academics: Elijah Buell	(606) 589-3040
Admissions: Rebecca Parrott	(606) 589-3018
Business Affairs: Angela Simpson	1-855-2GO-SKCTC (1-855-246-7528)
Workforce Solutions: Vic Adams	(606) 248-0416
Disability Services: Shana Lewis	(606) 589- 3019

Financial Aid: Barbara Gent	1-855-2GO-SKCTC (1-855-246-7528)
Human Resources: Billie Franks	(606) 589-3029
Library: Lynn Cox	(606) 589-3070
Public Relations: Tiffany Scott	(606) 589-3198
Brandon Robinson	(606)589-3092
Registration/Records: Anita Barnhill	(606) 248-0137
Transfer Information Liaison: Georgina Billings	(606) 248-0853
Veterans Affairs: Rebecca Parrott	(606) 248-0145
Website	southeast.kctcs.edu
Academics: Elijah Buell	(606) 589-3038
Admissions: Rebecca Parrott	(606) 589-3018
Business Affairs: Angela Simpson	1-855-2GO-SKCTC (1-855-246-7528)
Workforce Solutions: Vic Adams	(606) 248-0416
Disability Services: Shana Lewis	(606) 589- 3019
Financial Aid: Barbara Gent	1-855-2GO-SKCTC (1-855-246-7528)
Human Resources: Billie Franks	(606) 589-3029
Library: Lynn Cox	(606) 589-3070
Public Relations: Tiffany Scott	(606) 589- 3198
Brandon Robinson	(606) 589-3092
Registration/Records: Anita Barnhill	(606) 248-0137
Transfer Information Liaison: Georgina Billings	(606) 248-0853
Veterans Affairs: Rebecca Parrott	(606) 248-0145
Website	southeast.kctcs.edu

Administration

President	Dr. F. Lynn Moore
Chief Academic Affairs Officer	Elijah Buell
Chief Business Affairs Officer	Angela Simpson
Chief Student Affairs Officer	Dr. Rebecca Parrott
Chief Institutional Advancement Officer/Operations	Scott Sherman
Chief Learning Officer	Dr. Rick Mason
Chief Community/Workforce Econ. Dev.	Dr. Vic Adams
Chief Information Tech Officer	Merrill Galloway
Chief Cultural Diversity Officer	Carolyn Sundy
Director of Human Resources	Billie Franks
Director of Public Relations	Tiffany Scott
Division of Allied Health and Related Technologies	Michael S. Good
Division of Arts & Humanities	Ann Maciula
Division of Industrial Technology	Ronnie Daniels
Division of Natural Sciences and Mathematics	Rhonda L. Creech
Division of Nursing and Related Technologies	H. Kathy Guyn
Division of Social & Behavioral Sciences	Kevin Lambert

Faculty

Adkins, Tracy, Instructor, BS, Lincoln Memorial University, 2010
Ahlstedt, Lisa A, Librarian I, MS, University of Tennessee, 1995
Bargo, Glenna, Associate Professor, MSN, Eastern Kentucky University, 2008
Barrick, Lisa, Instructor, M.Ed., Lincoln Memorial University, 2010
Blanton, Scott, Professor, MSN, Northern Kentucky University, 2011
Bowling, Kenneth N, Professor, BS, Union College, 2003
Bowling, Tracy, Professor, PT, DPT, University of Kentucky, 2010
Bowling, Roger A, Professor, MS, Eastern Kentucky University, 2000
Brooks, Lana, Assistant Professor, MSN, Western Kentucky University, 2014
Buell Jr, Elijah, Professor, MBA, Morehead State University, 1980
Burnside, Patricia, Professor, MAEd, Tusculum College, 2007
Carmack, Michael E, Professor, AAS, Harlan Regional Technology Center, 1995
Chapman, Tammie, Associate Professor, MA, Cumberland College, 1995
Clark, Darrin, Associate Professor, MS, University of Kentucky, 1999
Cloud, Victoria, Assistant Professor, MA.Ed, Western Kentucky University, 2014
Clutts, David W., Professor, Ed.D, Liberty University, 2010
Collier, William G, Professor, MA, Eastern Kentucky University, 1992
Conklin, Peggy, Professor, MA, Morehead State University, 1985
Conover, Edwin Wheeler, Professor, PhD, Cincinnati, 1996
Corriston, Michael S, Professor, MA, Stephen Austin State University, 1967
Cox, Donna, Associate Professor, MA, Union College, 1973
Cox, Lynn, Librarian I, MS, University of Kentucky, 1994
Creech, Rhona, Associate Professor, MA, Morehead State University, 2003
Creech, Rhonda L, Professor, MA, Morehead State University, 1996
Daniels, Ronnie W, Professor, BS, Eastern Kentucky University, 2000
Dingus, Ariel, Assistant Professor, MA, Middle Tennessee State University, 2012
Dixon, Jill Suzanne, Associate Professor, DPT, University of Kentucky, 2011
Druen, Matthew, Instructor, Ph.D., University of Louisville, 2010
Dyer, Bradley, Professor, M.S., Eastern Tennessee State University, 1999
Eldahan, Ismail A, Associate Professor, MS, American Sentinel University, 2008
Epling, Michael, Professor, MBA, Morehead State University, 1995
Fields, Brian, Instructor, M.S., Everest University, 2010
Fleming, April, Assistant Professor, BSN, Morehead State University, 2013
Forbes, Zelma M, Professor, MS, Ohio University, 1983
Forson-Scopa, Elana, Associate Professor, MS, Eastern Kentucky University, 2003
Forson, Jason, Assistant Professor, M.S., University of Missouri, Kansas City, 2010
Gipe, Robert H, Professor, MA, University of Massachusetts, 1988
Good, Michael S, Professor, MS, Eastern Kentucky University, 2001
Gordon, Shelia, Professor, MLS/MSW, University of Kentucky, 2014/1995
Greene, Steven T., Associate Professor, AS, Southeast Kentucky Community and Technical College, 2008
Greer-Pitt, Sue, Professor, PhD, University of Kentucky, 1984
Guyn, Hazel K, Professor, MSN, Bellarmine University, 1989
Halcomb Jr, Astor, Professor, BUS, Morehead State University, 1992
Helton, Melissa, Associate Professor, MFA, Bowling Green State University, 2006
Hensley, Evelyn M., Librarian II, MS University of Kentucky, 2006
Herren, Douglas, Associate Professor, AAS, Southeast Kentucky Community and Technical College, 2006
Holbrook, Sandy, Professor, M.Ed, Western Kentucky University, 2011
Huff, Margie G, Professor, MS, Eastern Kentucky University, 2008
Hughes, Carlton W, Professor, MA, Marshall University, 1987
Jackson, Terri, Assistant Professor, MSN, Western Kentucky University, 2014
Johnson, Joseph, Associate Professor, PhD, Clemson University, 2010
Johnson, Lori, Associate Professor, RRT, BS, Eastern Kentucky University, 2014
Jones, Jamie, Instructor, MA, East Tennessee State University, 2006
Jones, Lynn Y, Professor, MA, Eastern Kentucky University, 1983
Kidwell, David T, Professor, PhD, University of Kentucky, 1993
Lambert, Kevin, Professor, MS, University of Tennessee, 1994
Lawson, Rebecca L., Associate Professor, CST, BA, Ashford University 2007
Layne, Kenneth, , Assistant Professor, BS, Eastern Kentucky University, 1988
Maciula, Terry A, Professor, MA, Oklahoma State University, 1991
Marcum, Joseph S, Professor, MA, University of Tennessee, 1980
Mayes, Caroline, Assistant Professor, MA, National University, 2007
McDannel, James H, Associate Professor, PhD, Southern Illinois University at Carbondale, 1981
McDonnell, Raymond E., Associate Professor, PhD, University of Tennessee, 1997
Miles, Nancy, Associate Professor, Certificate, Mountain Empire Community College, 1976
Miller, Rebecca D, Professor, MA, Union College, 1998
Murphy, Kevin, Librarian I, MSLS, University of Kentucky, 1995
Newman, Kathy, Associate Professor, M.Ed, Lindsey Wilson College, 2004
Noe, Roger, Professor, Ed.D, University of Kentucky, 1990
Omar, Saeb, Associate Professor, PhD, Mississippi State University, 1987
Pennington, Joy, Associate Professor, MSN, Chamberlain College of Nursing, 2013
Powell, Susan, Associate Professor, MA, University of Louisville, 2011
Ray, Johnny E, Associate Professor, BS, Eastern Kentucky University, 2000
Saylor, Ellen W, Professor, MSN, Bellarmine University, 1987
Schertz, Ann E, Professor, MA, Indiana University, 1986
Scopa Jr, Joseph A, Professor, MFA, Pennsylania State University, 1976
Silver, Roy, Professor, PhD, University of Toledo, 1982
Simpson, Amelia, Professor, MFA, Spaulding University, 2013
Simpson, Astor, Professor, MAEd, Union College, 1982
Singh, Rajiv, Assistant Professor, MS, University of North Dakota, 2012
Smith, Marshall, Assistant Professor, AAS, Southeast Kentucky Community and Technical College, 2011
Steenbergen, Gary L, Professor, MS, Eastern Kentucky University, 1996
Stewart, Jenny, Assistant Professor, BS, University of Kentucky, 1982
Sundy, Carolyn M, Professor, MSEd, University of Kentucky, 1985
Turner, Mary Leann, Associate Professor, BS from EKU, 1994
Vaught, Jamie, Professor, MBA, University of Kentucky, 1981
Walker, Robert, Assistant Professor, 22 years Occupational Experience
Webb, Danny, Associate Professor, MA, Eastern Kentucky University, 1994
Webb, Scelinda, Associate Professor, MAEd, Morehead State University, 1981
Whited, Paula, Assistant Professor, MSN, University of Louisville, 2007
Wilson, Odell D, Professor, EdD, East Tennessee State University, 1987
Wright, Wendy, Associate Professor, MS, Eastern Kentucky University, 2015

West Kentucky Community and Technical College

Mission Statement/Status of Accreditation

The mission of West Kentucky Community and Technical College is to provide excellence in teaching and learning, promote student success, and support economic development.

To accomplish this mission, West Kentucky Community and Technical College will provide the following:

- Academic, general education, and technical courses leading to certificates, diplomas, and associate degrees.
- A general academic curriculum of university-parallel courses meeting transfer requirements of the first two years of a baccalaureate degree.
- Technical and occupational curricula designed to meet current and future workforce needs.
- Community partnerships as an integral component in assessing and providing programs for cultural, educational, economic, and civic development.
- A comprehensive program of transitional education.
- Customized training to meet the changing needs of business and industry.
- Adult and continuing education.
- Associate services including, but not limited to, library services, cultural and enrichment opportunities, information technology resources, and student support services.

West Kentucky Community and Technical College, a member of the Kentucky Community and Technical College System, is a public, two-year degree granting institution serving western Kentucky with a tradition of accessible, affordable, and quality education and a commitment to meet the academic, workforce training, and lifelong learning needs of the community.

West Kentucky Community and Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of West Kentucky Community and Technical College.

Note: The Commission is to be contacted only if there is evidence that appears to support an institution's significant non-compliance with a requirement or standard.

Academic Programs

Transfer Curricula

Associate in Arts
Associate in Science

Transfer Curricula/Art Related

An Associate in Fine Arts (AFA) degree is designed to transfer into a Baccalaureate of Fine Arts (BFA) program at a four-year institution. Individual Associate in Fine Arts (A) degree curricula in each group is noted by an A in parenthesis.

Visual Art (A)

Occupational/Technical Curricula

Occupational/Technical Curricula: The program listing represents broad groups of instructional programs offered by the college. Individual certificate (C), diploma (D), and Associate in Applied Science (A) degree curricula in each group are noted by C, D, and A in parenthesis.

Advanced Nursing Assistant (C)
Air Conditioning Technology (C, D)
Apprenticeship Studies (A)
Auto Body/Collision Repair Technology (C, D)
Automotive Technology (C, D, A)
Business Studies:
- Administrative Office Technology (C)
- Business Administration Systems (C, D, A)
- Medical Information Technology (C, D, A)

Computer Aided Drafting and Design (C, D)
Computer and Information Technologies (C, A)
Computerized Manufacturing and Machining (C, D, A)
Cosmetology (C, D)
Criminal Justice (C, A)
Culinary Arts (C, D, A)
Dental Assisting/Dental Hygiene (D)
Diesel Technology (C, D)
Diagnostic Medical Sonography (A)
Emergency Medical Services – Paramedic (C, A)
Emergency Medical Technician (C)
Fire/Rescue Science Technology (C, D, A)
General Occupational/Technical Studies (A)
Health Physics (C)
Health Science Technology (A)
Heavy Equipment Operation (C)
Homeland Security/Emergency Management (C, A)
Interdisciplinary Early Childhood Education (C, A)
Logistics and Operations Management (C, A)
Manufacturing Industrial Technology:
- Electrical Technology (C, D, A)
- Industrial Maintenance Technology (C, D, A)

Marine Technology (C, A)
Mechatronics (C)
Medical Laboratory Technology (C, A)
Nursing (A)
Pharmacy Technology (C)
Physical Therapist Assistant (A)
Practical Nursing (C, D)
Radiography (C, A)
Surgical Technology (A)
Truck Driver Training (C)
Visual Communication:
- Design & Technology (C)
- Multimedia (C, D, A)
- Printing (C)

Welding Technology (C, D)

Contact Information

West Kentucky Community and Technical College
4810 Alben Barkley Drive
Paducah, KY 42001
(270) 554-9200
westkentucky.kctcs.edu

General Information

Accessibility Services	(270) 534-3406
Admissions/Records	1-855-GO-WKCTC (1-855-469-5282)
Advising Center	1-855-GO-WKCTC (1-855-469-5282)
Adult Learning Center (Adult Education/GED program)	
McCracken County	(270) 534-3451
Graves County	(270) 856-2422
Assessment Center	1-855-GO-WKCTC (1-855-469-5282)
COMPASS Testing	
Bookstore (Anderson Technical Building)	(270) 534-3247
Business Office	1-855-GO-WKCTC (1-855-469-5282)
Challenger Learning Center	(270) 534-3101
Clemens Fine Arts Center Box Office	(270) 534-3212
Community Education	(270) 534-3335
Commonwealth Middle College	(270) 534-3350
COMPASS Assessment Center	1-855-GO-WKCTC (1-855-469-5282)
Student Services	
Financial Aid	1-855-GO-WKCTC (1-855-469-5282)
GED/Adult Learning Center	
McCracken County	(270) 534-3451
Graves County	(270) 856-2422
General Information	(270) 554-9200
Human Resources	(270) 534-3078
Library	(270) 534-3197
Nursing	(270) 534-3466
Paducah School of Art & Design	(270) 534-3901
Public Relations	(270) 534-3083
Purchase Training Center (Mayfield)	(270) 247-9633
Security	(270) 564-8403
Skilled Craft Training Center (Mayfield)	(270) 856-2400
Workforce Solutions Assessments	(270) 534-3490
Transfer Advising Center	1-855-GO-WKCTC (1-855-469-5282)
TRIO - Student Support Services	(270) 534-3180
University of Kentucky College of Engineering	(270) 534-3129
Veterans Affairs	(270) 534-3485
Website	westkentucky.kctcs.edu

Administration

President/CEO	TBA
Vice President of Academic Affairs	Dr. Tena Payne
Vice President of Workforce & Economic Development	Jim Pape
Vice President of Student Development	Dr. Belinda Dalton-Russell
Vice President of Business Affairs	Susan Graves
Vice President of Administrative Services	John Carrico
Vice President of Enrollment Management	Nate Slaton
Vice President of Institutional Advancement	Ashley Wright
Director of Human Resources	Bridget Canter
Director of Marketing and Public Relations	Janett Blythe
Director of the Clemens Fine Arts Center	Brian Heller
Director of Adult Education	Samantha Williams
Associate Vice President of Academic Affairs	Dr. David Heflin
Associate Vice President of Learning Initiatives	Dr. Renea Akin
Dean of Online Learning	Connie Heflin
Dean of Allied Health and Personal Services Division	Peggy Block
Dean of Applied Technologies Division	Stephanie Milliken
Dean of Business and Computer Related Technologies Division	Tammy Potter
Dean of Humanities, Fine Arts and Social Sciences Division	Britton Shurley
Dean of Nursing Division	Shari Gholson
Dean of Paducah School of Art and Design Division	Paul Aho
Dean of Transition Education Division	Sanci Teague
Dean of Science and Mathematics Division	Dr. Karen Hlinka

Faculty

Adkins, Rhonda J, Professor, MA, Murray State University, 1985
Aho, Paul R, Associate Professor, MFA, University of South Florida, 1979
Akin, Selenia R, Professor, EdD, Vanderbilt University, 2010
Akojie, Felix O, Professor, PhD, University of IFE, Nigeria, 1985
Arnone, Samuel J, Assistant Professor, BS, Southern Illinois University, 1998
Blaine, Patricia A, Professor, MA, Fort Hays State University, 1981
Blankenship, Michelle, Instructor, MSN, Indiana Wesleyan University, 2013
Block, Peggy R, Professor, MHS, University of Indianapolis, 1996
Brackin, Kyra E, Assistant Professor, MSN, University of Kentucky, 1996
Brown, Rebecca H, Associate Professor, PhD, Virginia Tech, 2009
Buchanan, Patricia A, Professor, BS, Murray State University, 2008
Burgess, Melissa A, Instructor, MS, Murray State University, 2000
Cahill, Charles S, Assistant Professor, MS, California Polytechnic State University, 2009
Caldwell, Paul H, Assistant Professor, AS, Murray State University, 2009
Carrico, Mary C, Professor, MS, Southern Illinois University at Carbondale, 1991
Cates, Joel D, Assistant Professor, MS, Murray State University, 2011
Coltharp, Heather L, Associate Professor, MSE, University of Kentucky, 1999
Courtney, Troy G, Instructor, MBA, Dowling College, 2003
Darnell, Laken N, Instructor, BSN, Murray State University, 2013
Day, Jamie A, Associate Professor, BIS, Murray State University, 2015
Dickerson, Craig T, Associate Professor, AAS, West Kentucky Community and Technical College, 2008
Dillard, Laura L, Instructor, BSN, Murray State University, 1989
Donner, Jason W, Associate Professor, MA, Murray State University, 1995
Dossett, Kimberly M, Instructor, AAS, Community College of the Air Force, 1997
Dotson, Megan E, Associate Professor, MAE, Murray State University, 2010
Draffen, Carla K, Professor, MBA, Murray State University, 1987
Driver, Timmy E, Associate Professor, AAS, West Kentucky Community and Technical College, 2006
Durbin, Laura R, Associate Professor, MSN, Indiana Wesleyan University, 2013
Durham, Elizabeth A, Assistant Professor, MA, Nazareth College, 1988
Engelland, Erik J, Instructor, AAS, West Kentucky Community and Technical College, 2010
Ewing, Cheryl L, Associate Professor, MSN, American Sentinel University, 2013
Fletcher, Patrick A, Associate Professor, BBA, University of Kentucky, 2001
Flynn, Maria K, Professor, MA, Murray State University, 1985
Gericke, Kevin L, Professor, PhD, Virginia Polytechnic Institute, 1993
Gholson, Shari D, Professor, MSN, Vanderbilt University, 1997
Goodaker, Gary W, Professor, MS, University of Illinois at Urbana Champaign, 1997
Green, Curtis D, Instructor, AAS, Southern Illinois College, 2009
Gunn, Robert G, Associate Professor, BA, University of Alaska Fairbanks, 1981
Harper, Shawn, Associate Professor, MS, Murray State University, 1990
Hasegawa, John S, Associate Professor, MFA, University of Oregon, 2000
Heflin, Connie S, Professor, MSN, University of Evansville, 1983
Heflin, David J, Associate Professor, EdD, University of Kentucky, 2015
Hely, Sueann Wade, Professor, MBA, Murray State University, 1983
Henderson, Tyra F, Assistant Professor, MA, Murray State University, 2001
Henry, Greta G, Assistant Professor, MS, Murray State University, 2004
Hlinka, Karen F, Professor, EdD, University of Kentucky, 2012
Hobbs, Darren J, Instructor, BS, Western Kentucky University, 2015
Hofer, William S, Instructor, AAS, West Kentucky Community and Technical College, 2011
Holland, Virgil T, Associate Professor, AS, Murray State University, 2012
Hopper, Carrie, Assistant Professor, MS, Murray State University, 2008
Housholder, Paul D, Associate Professor, AS, Murray State University, 2001
Howard, William D, Instructor, AAS, West Kentucky Community and Technical College, 2016
Hutchinson, Sharla E, Professor, MA, Western Kentucky University, 1980
Isenberg, Paula R, Associate Professor, MSN, University of Southern Indiana, 2010
Johnson, Jonathan B, Assistant Professor, MS, Bellevue University, 2012
Johnson, Karen H, Assistant Professor, EdD, Trevecca Nazarene University, 2012
Johnson, Margaret F, Associate Professor, MSN, University of Phoenix, May 2011
Jones, Latoya A, Associate Professor, DC, Life University, 2001
Jordan, Tracy L, Associate Professor, MA, Murray State University, 1986
Knapp, Jo A, Professor, MA, Murray State University, 1990
Lee, Bobby A, Professor, MS, Murray State University, 1995
Liu, Sarah S, Associate Professor, PhD, Old Dominion University, 2006
Mahoney, Joseph D, Professor, MA, Murray State University, 1990

Martin, Patricia A, Associate Professor, MSN, Murray State University, 2000
McDanel, Tracy L, Associate Professor, BS, Murray State University, 2009
McGullion, Allison S, Associate Professor, MS, University of Colorado at Denver, 1998
McMullen, DeAnn J, Professor, MEd, Memphis State University, 1989
Miller, Rhanda G, Assistant Professor, BSN, Murray State University, 1988
Milliken, Stephanie K, Professor, MS, Murray State University, 1996
Morgan, Tiffinee S, Professor, MA, Murray State University, 1998
Newborn, Bradley C, Instructor, AAS, West Kentucky Community and Technical College, 2013
Nickell, David L, Professor, MA, Western Kentucky University, 1982
Norwood-McGregor, Vanessa A, Associate Professor, MSN, Frontier Nursing 2013
Payne, Tena B, Professor, EdD, University of Kentucky, 2001
Perry, Carolyn K, Associate Professor, MBA, Thunderbird School of Global Management, 1980
Petitt, Christy L, Associate Professor, MSN, University of Southern Indiana, 2007
Potter, Tammy F, Professor, MAEd, Murray State University, 1993
Pruitt, Douglas L, Professor, PhD, Bowling Green State University, 2000
Quimby, Beverly F, Professor, BS, Mid-Continent University, 2007
Ragsdale, Tina L, Assistant Professor, MS, Southern Illinois University at Carbondale, 2008
Reese, Gary L, Associate Professor, MPA, Murray State University, 1987
Roof, Sally, Professor, MS, Murray State University, 2002
Russell, Kimberly G, Associate Professor, MA, Southeast Missouri State University, 2000
Senn, Catherine E, Professor, MS, Johns Hopkins University, 1995
Shurley, Britton M, Associate Professor, MFA, Indiana University, 2007
Simmons, Randall R, Professor, MFA, University of Cincinnati, 1995
Spelbring, Legatha F, Associate Professor, MA, Indiana State University, 2002
Stephenson, Lisa G, Professor, EdD, University of Kentucky, 2012
Stewart, Michael E, Professor, MS, Murray State University, 1977
Stoffel, Claudia A, Professor, MSN, Bellarmine College, 1992
Stringer, Amanda P, Instructor, AAS, Henderson Community College, 2002
Swain, Deborah J, Professor, BS, Murray State University, 2008
Taveras, Victor M, Assistant Professor, PhD, Pennsylvania State University, 2009
Taylor, Brent E, Assistant Professor, MA, Murray State University, 2002
Taylor, Jason D, Professor, MS, Murray State University, 2000
Teague, Sanci E, Assistant Professor, MA, Murray State University, 2009
Thompson, Julie E, Associate Professor, MAT, Murray State University, 1999
Toon, Nichole M, Associate Professor, BS, Murray State University, 2009
Vallery, Deborah L, Assistant Professor, MSN, University of Southern Indiana, 2014
Vogel, Valerie R, Associate Professor, MS, Murray State University, 2007
Vos, John D, Professor, MBA, Murray State University, 1989
Wade, Constance L, Professor, MA, Murray State University, 1991
Wadlington, Corey M, Professor, MAE, Austin Peay State University, 1999
Wallace, Stanley C, Instructor, AA, University of Phoenix, 1996
Walters, Nacole G, Instructor, AAS, West Kentucky Community and Technical College, 2003
Watkins, Gerald L, Professor, MBA, Murray State University, 1984
Westerfield, Mark A, Associate Professor, AAS, West Kentucky Community and Technical College, 2005
Witherspoon, Reta P, Assistant Professor, AAS, West Kentucky Community and Technical College, 2005
Wright, Kelly R, Professor, MS, Murray State University, 1984
Youngblood, Norita A, Professor, MS, Murray State University, 2004

Admission

Applying for Admission

A student enrolling at a KCTCS college for the first time must submit an application for admission. Students who are re-entering a KCTCS college after being out for one or more semesters should complete an application for readmission. Students may be admitted to a KCTCS college as freshmen, as students with transfer credit from other institutions, as visiting students, or as non-degree students. KCTCS colleges admit students who have graduated from high school, who have earned a high school general equivalency diploma, who are eligible to pursue a GED, or who are dually enrolled in high school and the college.

Admission and Registration Procedures

- Prospective students visit the college's website to complete an online application or contact the admission office of the college they wish to attend and request an admission application.
- The full and proper name of the student and KCTCS student ID number must be used in registration and for all other official purposes.
- Freshmen entering a college for the first time will be required to send an official copy of their high school transcript, GED, or state approved high school equivalency to the admission office of the college they plan to attend. Official high school transcripts submitted to KCTCS may be shared with all KCTCS Colleges.
- Applicants entering with transfer credit must have an official transcript from each college attended forwarded to the admission office of the college they plan to attend.
- Applicants should submit results of the American College Test® (ACT), KYOTE, COMPASSTM or Scholastic Aptitude Test® (SAT). Applicants who have not taken the ACT® or other placement exam must complete a placement examination administered by any KCTCS college. For specific information regarding course placement, students should refer to the KCTCS Assessment and Placement Policy, which is available on the website at kctcs.edu, under "Students", then "Academic Regulations".
- Admission to a college does not guarantee admission to a specific program. Applicants seeking admission to an occupational/technical program at any KCTCS college should contact the admission office of the college of interest for information regarding any special requirements for program admission.
- Applicants must submit an application for admission and supporting documents prior to the first day of classes of the term or session for which the student plans to enroll. Some colleges, however, may have an earlier deadline date. Students should check with the admission office of the college they plan to attend for registration/application deadlines.
- A student who applies for admission to a KCTCS college will receive instructions to establish access to Student Self-Service. Student Self-Service allows a student access to many services such as registration, grades, class schedule, financial aid awards, bill payment and many other services.
- All enrolled KCTCS students will be given access to a KCTCS- assigned email account. Official communication from faculty and student service personnel will be sent to this address. Students will continue to have access to this account as long as they are enrolled.

After receiving the completed application and other documents, the admission office will notify the applicant of his or her admission status. It is expected that all students will submit all required documents in order to be eligible to register for classes. In the event this is not possible, students should contact the Admissions Office of the KCTCS college they wish to attend for instructions or assistance. While provisions may be provided, students will not be permitted to register for subsequent semesters without all official required documents.

Non-Degree/Non-Credential Students

At the discretion of the institution, persons who desire instruction without wishing to earn a credential may be admitted as non-degree/non-credential students. These students are exempt from taking the assessment instrument; however, all students (including high school students) must meet individual pre-requisites such as those for entry-level English and mathematics courses.

Students may declare credential seeking status after meeting regular admission requirements. The college may review and reclassify credential-seeking status in accordance with policies established at each individual college. Non-degree/non-credential students are not eligible for Federal Financial Aid programs.

Credit earned before a student meets admission requirements will be counted toward a credential.

High School Students

The condition of graduation from high school may be waived for a student currently enrolled in high school subject to the following guidelines. All applicants shall submit:

- a KCTCS application for admission by the appropriate deadline
- the results of the ACT®, SAT®, KYOTE, and/or other approved placement scores in accordance with KCTCS Assessment and Placement Policy.

A college may require additional information as part of the admission process.

In some cases, courses offered on the high school campus carry both high school and college credit. See your high school counselor for more information.

Second Chance Students

A student who has previously attended a college or university – other than a college in the Kentucky Community and Technical College System – and who has less than an overall grade-point average of 2.0 on a 4.0 scale in all course work attempted, may be considered for admission on probation provided the applicant demonstrates both of the following:

- has not enrolled at a college or university for at least one 16-week semester, and
- can demonstrate potential for success.

Transient/Visiting Students

A student may be admitted as a transient or visiting student. However, the student's parent college must certify that the student is enrolled or eligible to enroll at parent institution. Admission as a transient or visiting student is valid only for the semester or session for which the student applies.

International Students

Some KCTCS colleges are authorized under Federal law to enroll non-immigrant students. Consult the admission office of your college for details.

Readmission after Two or More Years: Academic Bankruptcy

A student who has been readmitted after having remained out of a KCTCS College for a period of two or more years and who has completed at least 12 credit hours in college-level courses with a grade point average of 2.0 or better after readmission, may choose to have his/her previous KCTCS course work removed from the computation of the grade point average. This procedure is commonly called "academic bankruptcy."

A student who declares academic bankruptcy will continue to receive credit for those courses in which a grade of A, B, C, D, or P was earned prior to readmission without including those grades in the GPA computation. A student who has completed a credential and re-enrolls may not apply the academic bankruptcy rule to courses taken for the credential already completed.

Previous College Work

An applicant who has previously attended an accredited college or university which awards degrees at the associate level or higher and who has an overall grade point average of at least 2.0 on a 4.0 scale in all course work attempted will be accepted for admission. For specific information on course placement, applicants should refer to the KCTCS Assessment and Placement Policy, which is available on the website at kctcs.edu, under "Students", then "Academic Regulations". An official transcript of all previous college work must be submitted. The Council on Postsecondary Education's (CPE's) general education transfer policy provides the basis for an institution's policy on the acceptance of transfer credit. The American Association of Collegiate Registrars and Admissions Officers' "Transfer Credit Practices of Educational Institutions" shall serve as a reference for admission of transfer students to an institution and for the acceptance of transfer credit.

KCTCS colleges shall provide academic counseling concerning the transfer of credit to transferring students. KCTCS colleges shall accept a student's college credit earned when a course is taken both for high school credit and for college credit. Credit earned through a dual credit or dual enrollment arrangement shall be treated the same as credit earned in any other college course.

Degree credit work is recognized credit hour for credit hour if taken on the semester system. Quarter hours are recognized as two-thirds (2/3) of a semester hour. Recognition of credit earned at a non-accredited college or university may be obtained by special subject examinations or may be validated upon the completion of 12 credit hours, excluding transitional courses, with a grade point average of at least 2.0.

Change of Program

When students enroll in a KCTCS college they select a program of study in which they wish to "major" or receive a credential. Students enrolled in any KCTCS college may request a program change through the student affairs office of their local college. These students are instructed to seek appropriate advisement and financial aid counseling.

KCTCS Assessment and Placement Policy

Students enrolling in a college credit course for the purpose of earning credit applicable toward an educational credential who meet college readiness benchmarks as identified by the Council on Postsecondary Education's College Readiness indicators may enroll in college-level coursework. In addition to the college readiness benchmarks included in the tables found in sections below, the Council on Postsecondary Education recognizes a GED score of 165 or higher, a PARCC Level 4 or a Smarter Balanced Level 4 as indicators of college readiness with no developmental, co-requisite or supplemental coursework required in reading, writing, and quantitative reasoning (below college algebra). Students who do not demonstrate college or career readiness for their academic plan must remedy the identified skill deficiencies by enrollment in transitional education courses, entry-level courses with approved supplementary academic support, co-requisite courses, or approved college readiness intervention(s) within the first two terms of enrollment per Council on Postsecondary Education regulation 13 KAR 2:020. Enrollment shall continue consecutively until the designated academic skill levels are attained.

Students with 12 or more credit hours at the 100 level or above in general education courses with a 2.0 GPA are exempt from reading placement requirements and are considered college ready in reading. However, all students must meet individual course pre-requisites such as those for entry-level English and mathematics courses.

This assessment and placement policy specifically applies to all credential-seeking students, students who transition from non-credential seeking to credential seeking, and students who are undecided about their choice of program as of Fall 2016The skills for which the Assessment and Placement Policy applies are mathematics, reading, and writing. An ACT® score of at least a 19 in mathematics, 20 in reading or18 in writing allows the student to enroll in entry-level courses for those areas.

Students who do not intend to seek an educational credential are exempt from taking the assessment instrument; however, all students must meet individual course pre-requisites such as those for entry-level English and mathematics courses.

The KCTCS Placement and Assessment policy can be found at the main KCTCS web page kctcs.edu, under "Students", then "Academic Regulations".

*Certificate programs that require 18 credits or less are exempt from the Assessment and Placement Policy. However, applicable course prerequisites still apply.

Mathematics Course Placement

ACT	SAT	COMPASS[3] Algebra Domain	ASSET[3]	KYOTE	TABE A	Wonderlic	KCTCS Courses
27 or higher	610 or higher	83-99	NA	NA	NA	NA	MAT 170, MAT 175 or any course listed below
22 or higher	510 or higher	50-99	El. Alg. 46-55 Int. Alg. 43-55	CA 14 or higher	NA	Quantitative 330 or higher	MAT 150 or any course listed below
19-21	460 or higher	36-49	El. Alg. 41-45 Int. Alg. 39-42	CA 7-13 or MP 22 or higher	NA	Quantitative 288 or higher	MAT 150 with supplemental instruction1; MAT 146, MAT 105, MAT 110, MAT 116, MAT 126 or any course listed below
18		31-35	El. Alg. 39-40 Int. Alg. 36-38	MP 18-21	NA	Quantitative 275 or higher	Intermediate Algebra or MAT 126 with supplemental instruction2 or any course listed below
17		25-30	El. Alg. 34-38 Int. Alg. 33-35	MP 15-21	NA	Quantitative 265 or higher	MAT 105, MAT 110, or MAT 116 with supplemental instruction2 or any course listed below
16		16-30	El. Alg. 27-38 Int. Alg. 26-35	MAT 055= MP 6-11 MAT 065= MP 12-17	NA	Quantitative 250 or higher	MAT 062, MAT 065, MAT 075 or any course listed below
		COMPASS Pre-algebra Domain[3]					
		42-99	N. Skills 38-55	MP 12-17	10.2 -12.9	Quantitative 250 or higher	MAT 062, MAT 065, MAT 075 or any course listed below
		24-41	N. Skills 25-37	MP 6-11	6.4-.10.1	Quantitative 200 or higher	MAT 055
		Less than 24	N. Skills 23-24	MP 0-5	Less than 6.4	Quantitative less than 200	ARI 030 or Refer to Adult Basic Education

[1]MAT 100 or other co-requisite support are options for supplementary academic support for MAT 150.

[2]Enrollment permitted only with concurrent supplementary instruction. College designated supplemental instruction must offer supplementary academic support, such as extra class sessions, additional labs, tutoring, and increased monitoring of students, beyond that usually associated with an entry-level course.

[3]COMPASS and ASSET will not be administered after November 30, 2016.

Reading Course Placement

ACT	SAT	COMPASS[3]	ASSET[3]	KYOTE	TABE A	Wonderlic	KCTCS Courses
ACT 20 or higher	470 Critical Reading	85-100	44-55	20 or higher	12.2-12.9	Verbal 325 or higher	No reading required
19		83-84	43		11.4-12.1	NA	Entry-level courses with concurrent enrollment in RDG 185, or supplemental instruction1, 2
15 or higher		70-82	38- 42		9.0-11.3	NA	RDG 0302 or DRE 0302
12 or higher		49-69	32-37		5.5-8.9	NA	RDG 020
		48 and below	No score available		5.4 and below	Verbal 179 or less	Refer to Adult Basic Education for Reading

[1]Supplemental instruction, such as extra class sessions, additional labs, tutoring, RDG 100, and increased monitoring of students beyond that usually associated with an entry-level course, to be developed and provided at the college.

[2]After the completion of this option students can move to entry level courses without additional supplemental instruction. NOTE: Students with 12 or more credit hours at the 100 level or above in general education courses with a 2.0 GPA have met college readiness benchmarks in reading are exempt from reading placement requirements.

[3]COMPASS and ASSET will not be administered after November 30, 2016.

English Course Placement

ACT	SAT	COMPASS	ASSET	KYOTE	TABE A	Wonderlic	KCTCS Courses
18 or above	Writing 430 or Critical Reading 450	74 -100	43-55	6 or higher	12.8-12.9	Verbal 310 or higher	ENG 101
14 or higher		39-73	38-42		9.6-12.7	NA	ENC 091
12 or higher		26-38	33-37		8.1-9.5	NA	ENC 090 or ARI 010
		25 and below			8.0 and below	204 and below	Refer to Adult Basic Education for English

Note: ENG 100 or other co-requisite support are options for supplementary academic support for ENG 101.

Co-requisite Model

Some KCTCS colleges provide co-requisite model instruction options in addition to or in place of transitional coursework. In the co-requisite model of instruction, students are placed into a credit-bearing course while developmental needs are met through additional instruction concurrent to the course. The pilot college models should be documented with the KCTCS Vice Chancellor of Academics Office and data of student success shared within the colleges. Research findings will be used to determine future policy for assessment and placement for the system.

Tuition and Charges

Tuition and Charges

Tuition and charges vary based on whether a student is a Kentucky resident, non-resident, or resident of a contiguous county of a contiguous state. Tuition and charges are on a per credit hour rate, including courses that are audited. For questions regarding residency status and guidelines, see Appendix A. All tuition and charges are payable in full prior to the beginning of classes for each session of the term unless prior arrangement has been made with the college business office. Consult your local college business office for college-specific required payment dates. Provisions for partial or deferred payment instructions are available in the "Payment Plan Options" section below.

Tuition and charges are assessed at the time of registration and based upon a per credit hour rate for all KCTCS colleges regardless of whether the courses are taken during the day, evening, and/or on weekends, and regardless of whether the courses are taken for credit or audit purposes. Tuition rates vary based upon Kentucky resident or non-Kentucky resident status. Qualifying students living in out of state counties that are contiguous to Kentucky may qualify for a reduced tuition rate. Fractional credit hour tuition and charges are assessed for fractional credit offerings (i.e., a student taking ¼ credit hour course would be assessed ¼ rate of student with same residency taking a 1 credit hour course). Tuition and charges are refundable as per the "Refunds" section below. Charges for services are non-refundable unless specifically stated as refundable. Consult with your college business office for specifics. Tuition charges are published at www.kctcs.edu.

Mandatory Student Fee

A mandatory student fee of $8 per credit hour will be assessed in the 2016-2017 academic year. Questions regarding fees may be directed to your college's business office.

Charges for Customized Course Offerings

Some courses, including courses created specifically upon request (credit or non-credit) may have additional charges. The additional charge, depending upon the requirements of developing and producing the customized course or program, will vary depending upon the length and content of the course or program offerings. All tuition and charges for customized courses are payable upon registration unless prior arrangements, including third party contracts, have been made with the offering college. Please contact your local college business office for specifics.

Charges for Services

Some charges for services may exist, including some individual program and/or special testing charges. General examples of these charges include, but are not limited to, the following: GED and ACT® testing, returned check charge and lost library book/video replacement charge. Charges will vary by service and are non-refundable. Contact your college business office for specifics.

Distance Education: There are no additional student charges associated with the verification of student identity.

Charges for Special Examination

KCTCS colleges offer students institutionally developed special examinations to demonstrate mastery of course content and receive credit toward program requirements. Special examinations are course specific and charges are separate from regular tuition charges. Special examination charges are payable in full at the time the examination is scheduled. Contact your local college business office for a listing of all charges.

Students who are enrolled in courses for which they elect to take a special examination in lieu of completing the course must officially withdraw from the course. The withdrawal date determines the status of the student's assessment, refund, and grade for the enrollment period. All special examination credit is awarded using the test credit process. In such instances, a grade will not be awarded on the current term grade report. Please contact your college's office of student affairs for application requirements.

Cancellation of Registration for Non-Payment of Charges

Students who have not paid their tuition and charges or arranged for a payment plan on or before the college's required payment date are subject to having their registration cancelled for non-payment. Consult your local college business office for college-specific required payment dates.

Payment Plan Options

In addition to the payment options of cash, check, or credit card, students may choose to participate in a KCTCS flexible tuition and charges payment plan (an option for students not planning to pay in full or having made an arrangement to pay in full) prior to the college's required payment date. To enroll in a payment plan, a student may login to his/her student self-service account (https://students.kctcs.edu) or contact his/her local college business office. Students have the option, depending on registration date, to enroll in one of three payment plan options listed below.

Plans	Service Charge	Percent Down	Monthly Payments	Availability
Option 1	*	None Registration Only	4	Advance
Option 2	*	25% Advance Registration	3	Through
Option 3	*	50% Regular Registration	2	Through

* Contact your local college business office for a list of charges.

Total payment of the balance of tuition and charges must be made by the required date. Contact your local college business office for specifics.

Last Day to Enter an Organized Class

The last day to enter (add) an organized class (including Saturdays and Sundays, but excluding KCTCS recognized holidays) is as follows:

16-week Session - by the close of business of the 7th calendar day of the session.

8-week Session - by the close of business of the 4th calendar day of the session.

6-week Session - by the close of business of the 3rd calendar day of the session.

5-week Session – by the close of business of the 2nd calendar day of the session.

4-week Session - by the close of business of the 1st calendar day of the session.

Irregular Session - prorated according to the length of the session in proportion to the traditional 16-week session.

Please check your local college course schedule and/or with your local college registrar for specific questions concerning the last day to enter (add) an organized class and session-specific Add/Drop dates.

Students cancelled for non-payment after the last day to enter an organized class may not be reinstated for that session. If in an acute extenuating circumstance a student cancelled for non-payment is re-enrolled, a charge per the "Schedule of Allowable Charges" must be assessed for that session. All tuition and charges must be satisfied at the time of reinstatement.

Refunds

In order to receive a tuition refund, a student must officially withdraw within the refund period specified within this policy. Refunds for sessions different from those listed below are prorated according to the session in proportion to the traditional 16-week session. A session is defined as an enrollment period within an academic term. An academic term (fall, spring, or summer) may have a number of sessions running concurrently -- 16-, 8-, or 4-week.

KCTCS has partnered with BankMobile Disbursements, a financial services company focused solely on higher education, to process student refund payments. For more information about BankMobile, visit this link: https://bankmobiledisbursements.com/refundchoices/.

Timeframe for Tuition Refunds*

Session	100 percent	50 percent	No Refund
16-week	Within 7th day	8th - 29th days	After 29th day
8-week	Within 4th day	5th - 15th days	After 15th day
6-week	Within 3rd day	4th - 11th days	After 11th day
5-week	Within 2nd day	3rd – 9th days	After 9th day
4-week	Within 1st day	2nd - 7th days	After 7th day

* Calendar days of the session, including all Saturdays and Sundays, but excluding KCTCS recognized holidays.

KCTCS Online Learn by Term Courses*

Refunds for KCTCS Online Learn by Term course sessions are prorated according to the length of the session in proportion to the traditional 16-week session. Charges for services for KCTCS Online Learn by Term courses are non-refundable unless specifically stated as refundable.

In abbreviated table format, KCTCS' refund policy for credit tuition for KCTCS Online Learn by Term courses is as follows:

Timeframe for Refunds*

Session	100%	50%	No Refund
16-week	Within 7th day	8th-29th days	After 29th day
8-week	Within 4th day	5th-15th days	After 15th day
6-week	Within 3rd day	4th-11th days	After 11th day
4-week	Within 1st day	2nd-7th days	After 7th day
Irregular	Prorated according to the length of session in proportion to the traditional 16-week session		

* Calendar days of the session, including all Saturdays and Sundays, but excluding KCTCS recognized holidays.

KCTCS Online Learn on Demand

KCTCS Online Learn on Demand courses tuition and charges are assessed at the time of registration and based upon a per credit hour rate approved for all KCTCS colleges regardless of whether the courses are taken during the day, evening, night and/or on weekends and regardless of whether the courses are taken for credit or audit purposes. Fractional credit hour tuition and charges are assessed for fractional credit offerings (e.g., a student taking ¼ credit hour course would be assessed ¼ rate of student with same residency taking a 1 credit hour course). Charges for services are non-refundable unless specifically stated as refundable.

In abbreviated table format, KCTCS' refund policy for credit tuition for KCTCS Online Learn on Demand courses is as follows:

Timeframe for Refunds*

Session	100%	50%	No Refund
16 week	Within 7th day	8th-29th days	After 29th day
15 week	Within 7th day	8th-27th days	After 28th day
14 week	Within 6th day	7th-25th days	After 25th day
13 week	Within 6th day	7th-24th days	After 24th day
12 week	Within 5th day	6th-22nd days	After 22nd day
11 week	Within 5th day	6th-20th days	After 20th day
10 week	Within 4th day	5th-18th days	After 18th day
9 week	Within 4th day	5th-16th days	After 16th day
8 week	Within 4th day	5th-15th days	After 15th day
7 week	Within 3rd day	4th-13th days	After 13th day
6 week	Within 2nd day	3rd-10th days	After 10th day

5 week	Within 2nd day	3rd-9th days	After 9th day
4 week	Within 1st day	4th-7th days	After 7th day
3 week	Within 1st day	2nd-5th days	After 5th day
2 week	Within 1st day	2nd-4th days	After 4th day
1 week	Within 1st day	2nd-2nd days	After 2nd day

*Calendar days of the session, including all Saturdays and Sundays, but excluding KCTCS recognized holidays.

KCTCS Colleges offer a variety of courses with different start and end dates. Please contact the business office at your local college for the guidelines for refunds.

Financial Delinquency

Any student who is delinquent in financial obligations to a college, or any division or organization of a college, shall not be allowed to register for future terms, receive transcripts, transfer credits to another institution, or graduate. Delinquent accounts are subject to KCTCS Business Procedure *7.4 Collection of Accounts Receivable* and may be referred to an outside collection agency. Note: referred accounts are subject to collection charges in addition to the amount owed the college and are the responsibility of the delinquent party. The delinquency, if referred to a collection agency, is also subject to being listed with credit reporting agencies. Specific questions may be directed to your college's business office.

Professional Liability Insurance

Students who enroll in any course requiring patient/client contact must show evidence they have professional liability insurance or purchase insurance through the college. This charge is non-refundable and is subject to change without notice. Please contact the College Business Office for details concerning the charge for Professional Liability Insurance.

Financial Aid

Overview

The colleges of the Kentucky Community and Technical College System (KCTCS) administer a variety of federal and state student financial aid programs, including local scholarships that are specific to an individual college or program. There is no charge to apply for student aid. Among the U.S. Department of Education Title IV programs offered are Pell Grants, Supplemental Educational Opportunity Grants (SEOG), Federal Work Study, and federally supported Federal Direct Loan Program. The colleges also participate in state supported aid programs. Detailed information regarding student financial aid can be found on KCTCS' website.

Student Eligibility and Application

To receive student financial aid from any program in which KCTCS participates requires meeting established eligibility criteria. A listing of specific criteria can be found on KCTCS' website. In general, you must have a demonstrated need as supported by the Free Application for Federal Student Aid (FAFSA) and a high school diploma or a General Education Development (GED) Certificate. You apply for student aid electronically by using the U.S. Department of Education's Web site, www.fafsa.ed.gov. Applying for student financial aid is free. You will need the appropriate income tax forms for you and your spouse or you and your parents (1040, 1040 A, 1040EZ, or 1040 Telefile). If you did not file a tax return you will need documentation of all sources of income, taxed or untaxed.

It is recommended that all records and materials used in completing the application be saved. A percentage of all applicants are randomly selected by the U.S. Department of Education for a process known as verification. If selected for verification, documentation must be provided in order to receive aid. Applying early insures consideration of your information for maximum funding and applicants are encouraged to apply as soon AFTER October 1 as possible.

For questions concerning the U.S. Department of Education Title IV programs, you may contact the Federal Student Aid Information Center between 9 a.m. and 8 p.m. (Eastern Time) Monday through Friday: 1-800-4-FED-AID (1-800-433-3243) or 1-800-730-8913 TDD for hearing impaired; otherwise you can contact your local college financial aid office.

Dual Enrollment/Consortium Agreements

In some instances, a student may take classes at different KCTCS colleges and generally count their full enrollment for financial aid purposes. If students wish to count enrollment hours from other universities towards their total enrollment specific eligibility requirements apply. Please consult your local student financial aid office for criteria.

Federal Student Loans

KCTCS colleges participate in the Federal Direct Loan Program. You do not have to be eligible for other federal student aid to participate in this program. However, a valid FAFSA, completed entrance counseling, signed master promissory note, and minimum enrollment of six credit hours are required.

State Programs

The Kentucky Higher Education Assistance Authority (KHEAA) administers a number of state supported student financial aid programs. Among those offered are: College Access Program (CAP), Kentucky Educational Excellence Scholarship (KEES) and KHEAA Early Childhood Development Scholarship. For the complete listing of aid program offerings, please see KHEAA's website: www.kheaa.com.

Statutory Scholarships (Waivers) for Kentucky Residents

KCTCS by virtue of state statute offers a number of tuition scholarships for Kentucky residents who meet specific eligibility criteria. Included in these are scholarships for: KCTCS Faculty and Staff; Kentucky residents age 65 or older; survivors of police officers and firefighters killed in duty; dependents of disabled police officers and firefighters; teachers; foster and adopted children; veterans; and children, step-children, and/or orphans of veterans killed or disabled in action.

A more detailed overview and eligibility requirements can be found on the KCTCS Website.

KCTCS and College Scholarships for Kentucky Residents

KCTCS also offers a number of tuition scholarships for Kentucky residents. These include: KCTCS Presidential Scholarship; John T. Smith Scholarship; Commonwealth Scholarship; Kentucky Colonels Better Life Scholarship; Charles E. Cranmer-Liquid Transport, Inc. Scholarship; and the Robert Stephen Weimann Tuition Scholarship for Non-Traditional Harlan County Residents. For details and application information, please contact your local college's student financial aid office.

Additionally, each year, a number of individuals, organizations and companies make funding available for scholarships to various KCTCS colleges. The amount and criteria for these awards will vary. These scholarships are advertised when available, and eligible students may apply at that time. Information is available through your local college's student financial aid office.

College Tuition Scholarships

Each local college offers tuition scholarships. Among these scholarships are: foundation scholarships to support enrollment management; need-based; program-specific; KCTCS Employee Spouse/Dependents; and Securing Educational Excellence in Kentucky Scholarship (SEEK). Please contact your local college for specifics.

Third Party Assistance Programs

There are a wide number of outside agencies who offer educational assistance and other services to students. Included among them are Kentucky Department of Veterans Affairs, Kentucky National Guard, Kentucky Office of Vocational Rehabilitation, and Kentucky Office for the Blind. A more detailed listing and brief description of the programs they offer and contacts for each can be found on the KCTCS Website. Additionally, local social service agencies offer a variety of programs to assist students including: Kentucky Works (JOBS), Temporary Assistance for Needy Families (TANF), Workforce Investment Act (WIA), and AmeriCorps.

Tax Credits

The U.S. Government grants a tax credit for eligible persons and/or their dependent attending college filing a federal tax return. The tax credits are referred to as the HOPE Scholarship and Lifetime Learning tax credit. Please contact your personal tax advisor regarding your eligibility.

Satisfactory Academic Progress (SAP)

Federal regulations mandate that a student receiving Federal Student Aid under Title IV programs must maintain satisfactory academic progress in his/her course of study regardless of whether or not student aid is awarded each semester. Satisfactory Academic Progress (SAP) is measured with the following standards: Qualitative (cumulative Grade Point Average of 2.0), Quantitative (Maximum Time Frame of 150 percent of the credits for completion of their program), and Quantitative Percentage (Earned hours/Attempted must equal at least 67 percent).

SAP Appeal Process

Students placed on student aid suspension and having unusual circumstances (illness, death in the family, accidents, etc.) and not making satisfactory academic progress have the right to appeal. However, during the appeal process persons are responsible for their own expenses, i.e., tuition, books supplies, etc.

Suspension Due to GPA

If a student is suspended from Student Aid because his/her cumulative grade point average does not meet the minimum 2.0 grade point average (GPA) and they choose to not file an appeal or their appeal is denied, he/she may take additional classes without Student Aid (unless the student is academically suspended) to raise his/her cumulative GPA to the 2.0 minimum and, if successful, may be reinstated. If a student is on Academic Probation or Academic Suspension, he/she will automatically be on Student Aid Probation or Student Aid Suspension. If a student is reinstated from Academic Suspension by appeal or any means, he/she must appeal his/her Student Aid status separately to be considered for Student Aid reinstatement eligibility.

Personal Financial Liability - Withdrawing or All "E"s

Students who withdraw from college before attending over 60 percent of the semester or who stop attending and therefore receive all "E"s may be financially liable to repay the student aid received. Persons desiring to withdraw from college must do so according to their college's withdrawal policy which can be found on the school's website. A copy of the worksheet and examples used for this calculation can be requested from each KCTCS College's Office of Student Aid.

Services for Students

Student and Academic Services

KCTCS colleges are structured to provide support that students need to achieve a rewarding and successful academic experience. Classes and laboratories are housed in modern structures on campuses designed to accommodate growth and development of college programs. Many classes are offered at off-campus facilities. All KCTCS colleges have bookstore services where students and faculty may obtain textbooks, as well as a variety of reading and instructional materials. Other services, facilities and opportunities are described below.

Counseling

KCTCS colleges provide counseling and guidance services to students. Qualified counselors are available at most KCTCS colleges and are prepared to provide individual or group career and academic counseling and testing, and to assist students in setting educational and career goals.

Placement

Assistance with employment opportunities and job placement is available at each KCTCS college. See the placement coordinator at the college to obtain details.

Testing

Many of the KCTCS colleges have been designated as testing centers for administering scholastic examinations. Examinations given at the colleges include the American College Test® (ACT), a Career Planning Program (CPP), ASSET®, COMPASSTM, WorkKeys® and correspondence study programs for other colleges and universities. Other examinations given at some of the KCTCS colleges include the GED (General Educational Development) Test, College-Level Examination Program® (CLEP), and ACT PEP (Proficiency Examination Program). Contact the local college Student Services Office for more information about examinations and testing schedules.

Students with Disabilities

Each college has a coordinator to assist students with accommodations necessary due to their disabilities. Students with disabilities who desire academic accommodations must provide the coordinator with current documentation of their disability including evidence of the need for academic accommodations.

Information Technology

KCTCS colleges provide computer laboratories for student utilization in accessing the Internet and other software applications required for completion of class projects and research assignments.

Learning Laboratories

Learning laboratories help students improve their basic learning skills. Students experiencing difficulties in meeting entry-level requirements for areas such as reading, writing, and mathematics; students who want to improve their current academic performance; and students who want to review previously learned skills are among those who have found the services provided by learning laboratories to be helpful. Learning laboratories may use a variety of techniques and materials to assist students such as: tutoring services, group work, and individualized instruction. Tests may be given to determine when students have reached a particular level of achievement. Materials include videos, individualized learning packets, programmed texts, sound pages, and computer-driven learning modules.

Libraries

KCTCS libraries actively support student learning, faculty teaching and research, and the intellectual and cultural lives of the communities they serve. They are an integral part of the teaching and learning process, promoting information literacy and providing information resources and services to support the educational and enrichment goals of Kentuckians. They provide information in a variety of formats with circulating print and audiovisual collections increasingly augmented by access to electronic full-text books and articles as well as other digital content. Thousands of titles in a variety of media and formats are added to the collections each year and hundreds of periodical subscriptions are maintained.

KCTCS libraries are staffed with talented, experienced professionals who provide instruction and guidance to students (both individually and in the classroom) in the effective use of traditional and electronic information resources. Working closely with other faculty members, KCTCS librarians are important catalysts for the enhancement of information literacy throughout the commonwealth. They are committed to helping students achieve competency in information literacy which becomes ever more crucial in the present age.

The KCTCS Library Catalog (opac.kctcs.edu) provides information on more than 520,000 titles owned or licensed by the libraries. Users can access it and licensed electronic resources from library web pages anyplace they have an internet connection and at any time. Circulation and interlibrary loan services for the physical collections are available in 34 locations across the state. The KCTCS libraries participate in the Kentucky Virtual Library (KYVL), providing access to its broad array of online full-text and citation databases. The libraries share information resources extensively with each other as well as other libraries. They provide interlibrary loan services for books, articles and, in most cases, audio visual materials.

Student Housing

With the exception of Bluegrass Community and Technical College, KCTCS colleges are nonresidential colleges and no housing facilities are provided.

Ready to Work: Assistance for Low-Income Parents

Ready to Work (RTW) is a partnership between the Kentucky Community and Technical College System and the KY Cabinet for Health and Family Services, Dept. for Community Based Services. RTW is designed to assist low-income parents who are enrolling in and attending community and technical colleges in Kentucky. RTW supports their college success and completion while meeting their participation requirements of the KY Transitional Assistance Program (K-TAP)through:

- Counseling, advocacy and mentoring
- Referrals to community resources
- Job references and referrals
- Job readiness, life skills, financial coaching and academic success seminars
- Work study opportunities both on and off campus

Contact your college RTW Coordinator to determine if you are eligible for RTW services.

Work and Learn

Ready to Work services have been expanded to include adult basic education students who are working toward their GEDs and college readiness. Work and Learn services are available to adult basic education students to help make their transition to college a smooth and successful one through:

- Counseling, advocacy & mentoring
- Referrals to community resources
- Job references & referrals
- Job readiness, life skills, financial coaching and academic success seminars
- Work study opportunities both on and off campus

KY Adult Education Services

If you didn't finish high school, there are free classes - at adult education centers and online - to help you earn your GED (high school equivalency diploma).

If you are a high school graduate and need to improve your reading, math or communication skills, you may be eligible for free adult education services in your choice of any Kentucky county, as well as online.

KCTCS Colleges serve as the adult education service providers in many Kentucky counties.

Policies and Procedures

Right to Know

KCTCS colleges support the intent of the Student Right to Know/ Campus Security Act and are committed to providing a safe and secure environment for all students and employees. Several approaches may be utilized for crime prevention, such as:

- Burglar alarms
- Campus security officers
- Key control system
- Light sensors
- Local police patrol
- Motion detection system
- Building checks
- Video monitor and closed circuit cameras
- Visitor control processes.

Additionally, crime prevention efforts include the dissemination of information at student orientations, faculty in-services, and student organization meetings. Conduct that violates the intent of this Act and poses an unacceptable risk to members of the community of the KCTCS college shall result in appropriate disciplinary action as defined by policy.

Student Rights and Responsibilities

Each college within KCTCS has a varied and distinguished tradition of higher education. Each college's students, faculty, and staff form an academic community that, while sharing certain characteristics with other types of associations, organizations, and societies, is rightly considered unique as a community, and should be governed, respected, and supported as a college community. The System has an obligation to maintain an atmosphere of academic freedom, to set and maintain standards of scholarship and conduct for students at each college, and to provide awareness for responsible student citizenship in the academic community.

The Student Rights and Responsibilities may be found in the *KCTCS Code of Student Conduct*, available on line at KCTCS.edu under "Current Students".

Drug-Free Policy

KCTCS colleges are committed to providing a safe environment for students, faculty, and staff. The KCTCS colleges have adopted the following drug-free policy:

Being under the influence of alcohol or other drugs or the use, possession, distribution, manufacture, or sale of illegal or unauthorized drugs is prohibited and is punishable as a felony offense on campus or within 1000 yards of campus. Conduct that violates this definition, poses unacceptable risks, and disregards the health; safety and welfare of members of the KCTCS college community shall result in disciplinary action up to and including suspension or termination. The KCTCS Colleges are in compliance with the Drug-Free Workplace Act of 1988 and Drug-Free Schools and Communities Act amendment of 1989.

Sexual Harassment

KCTCS colleges are committed to providing a learning environment free from sexual harassment. All KCTCS employees and students shall avoid offensive or inappropriate behaviors. Sexual harassment - a form of sexual discrimination - includes unwelcome sexual advances, requests for sexual favors or other verbal or physical actions of a sexual nature when submission to such conduct is made explicitly or implicitly as a term or condition of the student's status in a course, program or activity; or is used as a basis for academic or other decisions affecting such student; or when such conduct has the purpose or effect of substantially interfering with the student's academic performance or creates an intimidating, hostile or offensive academic environment.

Grievance Procedures

Grievance procedures for students are found in the *KCTCS Code of Student Conduct*. Specific details may be obtained by visiting the KCTCS website at kctcs.edu under "Current Students".

Student Organizations

Business and industry demand that KCTCS graduates are able to function in global and team environments. Most programs include a specific organized professional development component that is interfaced with student organizations. KCTCS colleges have numerous professional (e.g. Kentucky Association of Nursing – KANS) as well as career and technical student organizations (e.g., Skills USA; Health Occupations Student Organization - HOSA; Professional Business Leaders – PBL). Contact the college's student affairs office for details and a complete list of student organizations. Following are some of the nationally recognized honor organizations and student councils available to KCTCS students.

National Vocational Technical Honor Society

The NVTHS recognizes students who have shown qualities of leadership, scholarship, skill, responsibility, and service. Each student must have the recommendation of his or her major instructor and meet the minimum criteria. Benefits of membership include: the student's name will be included in the National Register of Vocational Technical Students of America, as well as being able to request up to three letters of recommendation written by the National NVTHS. For more information visit: www.nths.org.

Phi Theta Kappa Honor Society

Phi Theta Kappa is the international honor society of two-year colleges. Each college has its own chapter of this organization. The purpose of Phi Theta Kappa is to recognize and encourage scholarship among two-year college students. To achieve this purpose, Phi Theta Kappa and its chap-

ters provide opportunities for the development of leadership and service, an intellectual climate for exchange of ideas and ideals, lively fellowship for student scholars, and stimulation of interest in continuing academic excellence. For more information, contact the Phi Theta Kappa advisor on each campus.

Student Government

The purpose of the student government is to provide a channel of communication whereby students can express themselves and make their views known to fellow students, faculty, and administration. The student government assists in sponsoring and regulating student activities and encourages the active participation of students in these activities. It is concerned with student involvement in all aspects of college life along with an appreciation of the privileges and responsibilities of being a college student. Members of the student government are elected representatives of the student body.

Inter-KCTCS College Student Advisory Council

The Student Advisory Council consists of the student body president from each college. Members of this organization serve in an advisory capacity to the Vice President responsible for Student Services. The Advisory Council also provides the opportunity for the student body presidents to exchange ideas on topics of mutual concern.

Co-Curricular Activities

Co-curricular activities for students vary among KCTCS colleges. Many opportunities exist for participation in student government, newspaper or literary magazine publication, debating, speech contests, drama, orchestra, band, choral groups, college-sponsored radio and television programs, art shows, and intramural sports. Several KCTCS colleges have joint faculty-student activities such as art exhibits, bowling leagues, drama productions, and presentation and discussion of selected foreign and American films.

FERPA

The Family Educational Rights and Privacy Act (FERPA) of 1974, as amended, is a federal law that protects the privacy and confidentiality of personally identifiable information contained within student education records. Colleges in the Kentucky Community and Technical College System comply with FERPA's confidentiality protections and adhere to procedures dealing with student education records and directory information recommended by the American Association of Collegiate Registrars and Admissions Officers.

In its discretion, a college or KCTCS as appropriate may provide Directory Information in accordance with the provisions of FERPA to include:

- student name
- address
- email address
- telephone number
- date and place of birth
- major field of study
- dates of attendance
- degrees and awards received
- the most recent previous educational agency or institution attended by the student
- participation in officially recognized activities and sports

Privacy and Release of Student Records

Students may withhold Directory Information by notifying designated officials at the college in writing within ten (10) calendar days from the first scheduled day of class of the fall term. All written requests for non-disclosure will be honored by the college for one (1) academic year. Requests to withhold Directory Information must be filed annually thereafter. A request for "non-disclosure" is commonly called a "privacy request".

Student Records Maintenance

This is to serve notice to all students of the KCTCS of the rights and restrictions regarding the maintenance, inspection, and release of student records contained in the Family Educational Rights and Privacy Act of 1974 (FERPA). The colleges of KCTCS offer a wide variety of services to students. Each college requires the maintenance of records concerning students enrolled in that particular college. The following is a list of the types of records that may be maintained by the College and/or the System Office for students:

- Academic records from schools previously attended
- Scores or results on various standardized tests and interest/attitude inventories
- Degrees awarded
- Current academic work completed
- Grades and other faculty evaluations
- Applications for admissions
- Applications and other data related to financial aid
- Applications for employment
- Class rosters
- Letters of recommendation
- Academic advisor notes
- Attendance data
- Biographical and identifying information (including name, social security number, sex, marital status, date of birth, residency and citizenship status, ethnic background, academic major, and military status)
- Medical data
- Current student status
- Accounts relating to charges
- Academic offenses
- Disciplinary offenses
- Counseling notes

The colleges are responsible for the maintenance of records in all categories.

In general, the records maintained by the college are available only to the student, to college personnel with legitimate educational interests, a person or company with whom the College has contracted as its agent to provide a service, to other institutions where the student is seeking financial aid, and to authorized representatives of the Comptroller General of the U.S., the Secretary of the U. S. Department of Education, or an administrative head of an education agency, in connection with an audit or evaluation of federally supported programs, and as provided by Section 164.283 of the Kentucky Revised Statutes. However, information may be released by the institution to appropriate persons in connection with an emergency if the knowledge of such information is necessary to protect the health or safety of a student or other persons. Records may be disclosed without consent to officials of another school in which a student seeks or intends to enroll.

Records may also be furnished in compliance with a judicial order or pursuant to a subpoena or with the consent of the student.

Students may inspect and review all records pertaining to them within forty-five (45) days of making requests for the same, except for 1) records created or maintained by a physician, psychiatrist, psychologist, or other recognized professional or paraprofessional acting or assisting in a professional capacity in connection with the treatment of the student (except that the student may have these records reviewed by a physician or appropriate professional designated by the student), 2) financial records of the parents, 3) confidential letters and recommendations put in the files prior to January 1, 1975, and 4) confidential recommendations relating to admission, application for employment, or honors, if the student waived his or her right to review such records. Where a particular record cannot be reviewed by a student without revealing confidential information relating to other students, the records custodian will inform the student, upon request, of the contents of the record pertaining to that student.

Appeal

A student who believes that any record maintained by the college, the college district, or the KCTCS pertaining directly to that student is inaccurate, misleading, or otherwise violates the right of privacy of the student as provided by Title IV of Pub.L.90-247, as amended, and Pub.L.93-380 as amended by Senate Joint Resolution 40 (1974), may request a hearing before a panel of three persons appointed by the President of the Kentucky Community and Technical College System. The panel may direct that appropriate action be taken to correct, explain, or expunge the record(s) challenged.

Requests for hearings should be sent to the Records Custodian, Kentucky Community and Technical College System, 300 N Main St, Versailles, KY, 40383 and will be addressed in a timely manner.

Academic Services

Introduction

KCTCS colleges offer AA, AS, and AFA degree programs which allow students to tailor and complete a general course of study to meet their interests and to fulfill the general education requirements of the first two years of bachelor degree programs; AAS occupational/technical degree programs to meet workforce needs and which may be transferable to a bachelor degree; occupational/technical diplomas and certificates that are also aligned with workforce needs; dual credit courses for high school students; and continuing education and community service opportunities.

All students are encouraged to utilize the advising and transfer services available to complete programs of study at KCTCS, and to plan for lifelong and continuing education to support academic and career goals. Advising and transfer services are available to help facilitate students' progress and success.

Academic Advising

Academic advising is an essential element of the total educational experience and is available to every KCTCS student. Whether a student is seeking credentials exclusively from KCTCS or plans to use the education obtained at KCTCS to pursue a higher degree at another institution, academic advising is critical. Advisors strive to assist students in obtaining accurate information about academic requirements, long- and short-term educational planning, and resources available to assist students in advancing their academic and professional goals. Students with specific plans should contact an advisor at the local KCTCS college as soon as these goals are identified for the most effective advising and planning. In order to receive academic advising students should consult the local KCTCS college for information. Students can also refer to the Transfer Contacts listed on pages 59 to 61 on the KCTCS web site at: kctcs.edu Search words: Transfer Contacts to assist with transfer planning at KCTCS and a four-year university.

Although academic advisors provide assistance, students are responsible for knowing institutional policies, procedures, requirements, and seeking out assistance when needed.

General Education Certifications

Students with defined professional/career goals requiring a bachelor's degree may choose to begin their education at a community college then transfer to any four-year college or university. The General Education Transfer Policy is in place between all public colleges and universities in Kentucky, and the KCTCS policy regarding general education certification is outlined in the KCTCS Rules of the Senate, Section V 5.0.4.

Fully General Education Certified

Students who have successfully completed a general education program of 33 credit hours (a minimum of 15 hours completed with KCTCS) will be "fully general education certified". Students may then transfer these hours altogether as a block. Students must fulfill any additional general education requirements of the receiving institution that have not been satisfied through the courses in the core or through additional KCTCS college courses.

Category Certification

Students who have successfully completed only some categories in the 33-credit hour component will be certified for those categories they complete. For example, a student who has completed the six-hour Arts & Humanities requirement of the AA/AS degree may be certified as having met the General Education Transfer Policy's six-hour Arts & Humanities requirement. Students with "category" certification and/or additional coursework must fulfill the remaining general education requirements for the bachelor degree program.

If you have questions about the General Education Transfer Policy, please contact your college's Transfer Contact. Completed general education certifications are automatically printed on the official transcript. If the requirements for certification have been completed, but the appropriate certification is not printed on the transcript, contact the college registrar's office to request the appropriate certification be added to your transcript and request an additional transcript including the certification.

Transfer to Baccalaureate Institutions

All students are encouraged to complete a program of study at KCTCS and to consider transferring to a bachelor degree program to further their academic and career goals. The AA and AS degrees include a substantial amount of general education courses and are designed to accommodate transfer. KCTCS has developed a number of transfer agreements to assist students completing AA, AS, and AAS programs to transfer to bachelor degree programs. A list of these transfer agreements can be found at the KCTCS web site at: kctcs.edu Search words: Transfer Agreements.

Transfer Contacts and Services

There are a number people available to assist students with information about planning and resources for transferring to a bachelor's degree program. Students who are interested in transferring, or who just have questions about transferring, are encouraged to seek information as soon as possible. Each KCTCS college provides transfer services and has at least one transfer contact to assist students. Each public and private postsecondary institution in Kentucky also has staff to provide information to KCTCS students about transferring to that specific institution. Students are encouraged to talk with transfer contacts at their KCTCS college as well as transfer contacts at the college or university to which they want to transfer. A short list of public university transfer contacts is included below for quick reference. A complete list of transfer contacts at each KCTCS college and public and private colleges/universities in Kentucky is available at the KCTCS web site at: kctcs.edu Search words: Transfer Contacts.

KCTCS Transfer Contacts

Chancellor's Office
300 North Main Street
Versailles, KY 40383
(859) 256-3389

Ashland Community and Technical College

Transfer Services
College Drive Campus - Room 224
Technology Drive Campus – Room 157

Transfer Contacts

Hope Perkey
Transfer Advisor
ACTC/Morehead State University
1400 College Drive
Ashland, KY 41101
606-326-2098
Hperkey0001@kctcs.edu

Sheila Marcum
Admissions Advisor
1400 College Dr.
Ashland, KY 41101
606-326-2418
sheila.marcum@kctcs.edu

Jim Jagielo
Admissions Advisor
1400 College Dr.
Ashland, KY 41101
(606) 326-2196
jjagielo@kctcs.edu

Janet Thompson
Admissions Advisor
1400 College Dr.
Ashland, KY 41101
606-326-2149
janet.thompson@kctcs.edu

Big Sandy Community and Technical College

Transfer Services
Prestonsburg Campus - Counseling Services, Student Center Building, Room 100
Pikeville Campus - Counseling Services, Room 105J
Mayo Campus – Counseling Services, Building C, Room 108

Transfer Contacts

Jeffrey T. Hicks
Counselor
Big Sandy Community and Technical College
One Bert T. Combs Drive
Prestonsburg, KY 41653
(606) 886-3863 (Ext. 64841)
(888) 641-4132
jeffery.hicks@kctcs.edu

Jimmy Wright
Dean of Student Affairs
Big Sandy Community and Technical College
One Bert T. Combs Drive
Prestonsburg, KY 41653
(606) 886-7347
(888) 641-4132
jimmy.wright@kctcs.edu

Leslie Bays
Counselor
Big Sandy Community & Technical College
One Bert T. Combs Drive
Prestonsburg, KY 41653
(606) 886-3863 (Ext. 67391)
(888) 641-4132
leslie.bays@kctcs.edu

Elizabeth Cole
Counselor
Big Sandy Community & Technical College
120 South Riverfill Drive
Pikeville, KY 41501
(606) 218-2060 (Ext. 81215)
(888) 641-4132
elizabeth.cole@kctcs.edu

Bluegrass Community and Technical College

Transfer Services
BCTC Transfer Center
Cooper Campus, Room 118 Oswald Building

Transfer Contacts

Aaron Akey
Interim Director, Transfer Center
Bluegrass Community and Technical College
118 Oswald Building, 470 Cooper Drive
Lexington, KY 40506
(859) 246-4620

Becky Critchfield
Transfer Advisor
118 Oswald Building
470 Cooper Drive
Lexington, KY 40506
(859) 246-4620
www.bluegrass.kctcs.edu/transfer_center

Elizabethtown Community and Technical College

Transfer Services
Counseling and Transfer Center
Main Campus, Room 106 CRPEC Building

Transfer Contacts

Mary Byerley-Shetty
Coordinator of Transfer Services
Elizabethtown Community and Technical College
610 College Street Road
Elizabethtown, KY 42701
270.706.8751

Sharon Spratt
Director of Counseling
Elizabethtown Community and Technical College
600 College St. Rd.
Elizabethtown, KY 42701
(270) 706-8478
sharon.spratt@kctcs.edu

Gateway Community and Technical College

Transfer Services
gw-transfer@kctcs.edu
Edgewood Campus, E105M Student Services Center Building

Student Support Services (TRIO)
gw-sssoffice@kctcs.edu
Urban Metro Campus, 214 Two Rivers Building

Transfer Contacts

Darrin McMillen
Transfer Advisor
790 Thomas More Parkway
Edgewood Campus
Phone: 859-815-7642
darrin.mcmillen@kctcs.edu

Colleen Kane
Director, Student Support Services (TRIO)
Urban Campus - Two Rivers Building
Phone: 859-442-1614
Fax: 859-442-1621
colleen.kane@kctcs.edu

Hazard Community and Technical College

Transfer Services
University Center of the Mountains (UCM)
Hazard Campus, 152 Jolly Classroom Center

Transfer Contacts:

Dr. Deronda C. Mobelini
Executive Director, UCM
Hazard Community and Technical College
One Community College Drive
Hazard, KY 41701
606-487-3182
deronda.mobelini@kctcs.edu

Helen Brunty
Career and Transfer Advisor, UCM
Hazard Community and Technical College
One Community College Drive
Hazard, KY 41701
606-487-3077
helen.brunty@kctcs.edu

Henderson Community College

Transfer Services
Transfer Center
101 Administration Building
2660 S. Green Street

Transfer Contact

Lorie Maltby
Transfer Coordinator
Henderson Community College
107 Administration Building
2660 S. Green St.
Henderson, KY 42420
(270) 831-9828
hcctransfer@kctcs.edu

Hopkinsville Community College

Transfer Services
Student Transition Center
Main Campus, Technology Center Building

Transfer Contact

Kanya Allen
Career and Transfer Services Coordinator
Technology Center Building
Career and Transfer Center, Room 204
(270) 707-3827
kanya.allen@kctcs.edu

Jefferson Community and Technical College

Transfer Services
Transfer Center
Downtown Campus - JEC Building Suite 603
JF-Transfer-Center@kctcs.edu
www.jefferson.kctcs.edu/Academics/Transfer-Center

Transfer Contacts

Selena Sanchez
Transfer Advisor
Jefferson Community & Technical College
Downtown Campus, JEC Building room 603
(502) 213-2285
Selena.sanchez@kctcs.edu

Kitty Zachery
Transfer Advisor
Jefferson Community & Technical College
Downtown Campus, JEC Building room 603
(502) 213-2443
Kitty.zachery@kctcs.edu

Heather Yocum
Jefferson Community and Technical College
Carrolton Campus, Room
(502) 213-5216
Heather.yocum@kctcs.edu

Madisonville Community College

Transfer Services
Main Campus, John H Gray Building
Enrollment Center

Transfer Contact

Lori Johnson
Transfer Coordinator
2000 College Drive
Madisonville, KY 42431
(270) 824-1827
(866) 227-4812
lori.johnson@kctcs.edu

Maysville Community and Technical College

Transfer Services
Transfer Center
Main Campus, Administration Building, Room A251

Transfer Contact

Dana Calland
Transfer Coordinator
Maysville Community and Technical College
1755 US HWY 68
Maysville, KY 41056
(606) 759-7141, ext. 66148
dana.calland@kctcs.edu

Owensboro Community and Technical College

Transfer Services
TRAC Central (Transfer, Retention, Advising, and Careers)
2nd Floor, Room 206; Learning Resource Center
Main Campus, 4800 New Hartford Road
Owensboro, KY
Ph# 270-686-4683

Transfer Contacts

Katie Ballard
Career Resource and Transfer Coordinator
TRAC CENTRAL, LRC Rm 206
4800 New Hartford Road
Owensboro, KY 42303
(270) 686-4529
katie.ballard@kctcs.edu

Sandy Carden
Registrar
Owensboro Community and Technical College
4800 New Hartford Road
Owensboro, KY 42303
(270) 686-4536
(866) 755-6282
sandy.carden@kctcs.edu

Somerset Community College

Transfer Services
Transfer Center
Somerset Campus North, Stoner Building, Room 102
Laurel Campus North, Building 2, Room 228

Transfer Contacts

Somerset Campus

Betty Nichols
Administrative Assistant
Somerset Community College
Stoner Building, Room 102G
808 Monticello Street
Somerset, KY 42501
(606) 451-6650
betty.nichols@kctcs.edu

Laurel Campus

Betty Nichols
Administrative Assistant
Somerset Community College
Building 2, Room 228
London, KY 40741
(606) 878-4763
betty.nichols@kctcs.edu

Southcentral Kentucky Community and Technical College

Transfer Services
Student Success Center
Main Campus, Building A

Transfer Contacts

Shawn Stovall
Director of Student Success
Southcentral Kentucky Community and Technical College
1845 Loop Drive
Bowling Green, KY 42101
(270) 901-1188
shawn.stovall@kctcs.edu

Denna White
Director of Admissions
Southcentral Kentucky Community and Technical College
1845 Loop Drive
Bowling Green, KY 42101
(270) 901-1094
(800) 790-0990
denna.white@kctcs.edu

Southeast Kentucky Community and Technical College

Transfer Services
Transfer Assistance Center
Cumberland Campus, Chrisman Hall
Middlesboro Campus, Administration Building
Whitesburg Campus, Caudill Hall
Harlan Campus, Administration Building

Transfer Contacts

Georgenia Billings
Transfer Advisor
Southeast Kentucky Community and Technical College
1300 Chichester Ave
Middlesboro, Ky 40965
(606) 248-0853
georgenia.billings@kctcs.edu

Ron Brunty
College Counselor
Southeast Kentucky Community and Technical College
2 Long Avenue
Whitesburg, KY 41858
(606) 589-3320
(888) 274-7322
ron.brunty@kctcs.edu

Joe Sutton
Counselor
Southeast Kentucky Community and Technical College
1300 Chichester Ave.
Middlesboro, KY 40965
606 248-0768
joe.sutton@kctcs.edu

West Kentucky Community and Technical College

Transfer Services
Transfer Center
Main Campus, Anderson Technical Building
WKCTC-TransferCenter@kctcs.edu

Transfer Contact

Rachel Goatley
Coordinator of Advising and Transfer
West Kentucky Community and Technical College
106 Anderson Bldg., P.O. Box 7380
Paducah, KY 42002
(270) 534-3187
rachel.goatley@kctcs.edu

Public University Transfer Contacts

Eastern Kentucky University

Nicole McGrew
Transfer Admissions & Articulation Coordinator
859-246-6430
859-248-4340
nicole.mcgrew@eku.edu

Gail Creekmore
Transfer Center
(606) 451-6708
gail.creekmore@eku.edu

Kentucky State University

Tava Clay
KSU Transfer Coordinator
(859) 246-6290
tava.clay@kysu.edu

Morehead State University

Brad Bennington
Assistant Registrar for Degree Audit & Transfer Articulation
606-783-5246/2008
b.bennington@morehead-st.edu

Jen Timmerman
Transfer Senior Enrollment Services Counselor
(606) 783-5488
j.timmerman@morehead-st.edu

Murray State University

Maria Rosa
Director, Transfer Center
(800) 669-7654
(270) 809-4225
transfercenter@murraystate.edu

Northern Kentucky University

Matt Elrod
Transfer Coordinator
859-572-7524 (800) 637-9948
elrodma@nku.edu

University of Kentucky

Mike Shanks
Transfer Center Director
(859) 257-6306
jmshan2@email.uky.edu

UK Transfer Center
859 218-1724
UK transfer@uky.edu

University of Louisville

Wes Partin
Associate Director, Transfer Services
(502) 852-4959
Wbpart01@louisville.edu

Josh McKee
Admissions Counselor Sr.
(502) 852-4958
Josh.mckee@louisville.edu

Tawana McWhorter
Asst. Director of Advising
ULTra Program
(502) 213-2541
(800) 334-8635 ext. 2541
tawana.mcwhorter@kctcs.edu
t0oliv02@gwise.louisville.edu

Western Kentucky University

Marvin Daniel
Coordinator of Transfer Admissions
(270) 745-2551
(800) 495-8463
TDD: (270) 745-5389
marvin.daniel@wku.edu

Credit for External Experiences

KCTCS colleges recognize that valid college-level learning experiences occur outside the traditional classroom setting. Colleges will assist students in recognizing appropriate external experiences and applying them toward a KCTCS credential. Colleges reserve the right to validate student competence through the mechanisms described in this section.

Advanced Placement Program

KRS 164.098 requires Kentucky Institutions to award credit for scores of 3 or higher on the Advanced Placement Tests. KCTCS colleges participate in the Advanced Placement Program of the College Entrance Examination Board. Interested students should have their official examination results sent to the Admissions Office of their local KCTCS College.

Guidelines for Advanced Placement Credit

AP Test	Score	Credit Awarded	Credit Statement
Art History	3	ART 105 or ART 106	3 credit hours
	4-5	ART 105 and ART 106	6 credit hours
Biology	3	BIO 112	3 credit hours
Calculus AB	3	MAT 175	5 credit hours
Calculus BC	3	MAT 175 and MAT 185	10 credit hours
Chemistry	3	CHE 170	3 credit hours
	4-5	CHE 170 & CHE 180	6 credit hours
Chinese Language and Culture	4	RAE 150	4 credit hours
	8	RAE 150 and RAE 151	8 credit hours
Comparative Government and Politics	3	POL 210	3 credit hours
Computer Science A	3	TRN 172	3 credit hours
	4-5	CIT 149	3 credit hours
English Literature/Composition	3	ENG 161	3 credit hours
English Language/Composition	3	ENG 101	3 credit hours
Environmental Science	3	EST 150	4 credit hours

European History	3	HIS 104 and HIS 105	6 credit hours
French Language	3	FRE 201	3 credit hours
	4-5	FRE 201 and FRE 202	6 credit hours
German Language	3	GER 201	3 credit hours
	4-5	GER 201 and GER 202	6 credit hours
Human Geography	3	GEO 172	3 credit hours
Italian Language and Culture	3	TRN 106***	3 credit hours
	4-5	TRN 106 and TRN 107***	6 credit hours
Japanese Language and Culture	3	JPN 201	3 credit hours
	4-5	JPN 201 and JPN 202	6 credit hours
Latin: Vergil	3	TRN 106***	3 credit hours
	4-5	TRN 106 and 107***	6 credit hours
Microeconomics	3	ECO 201	3 credit hours
Macroeconomics	3	ECO 202	3 credit hours
Music Theory	3	MUS 174	3 credit hours
Physics 1	3	PHY 201*	4 credit hours
Physics 2	3	PHY 203*	4 credit hours
Psychology	3	PSY 110	3 credit hours
Spanish Language	3	SPA 201	3 credit hours
	4-5	SPA 201 and 202	6 credit hours
Spanish Literature	3	TRN 110 (humanities)***	3 credits hours
Statistics	3	STA 220	3 credit hours
Studio Art 2-D	3	ART 112	3 credit hour
Studio Art 3-D	3	ART 113	3 credit hours
Studio Art – Drawing	3	ART 110	3 credit hours
US Government & Politics	3	POL 101	3 credit hours
US History	3	HIS 108 and HIS 109	6 credit hours
World History	3	HIS 101	3 credit hours

**Upon presentation of documentation of appropriate laboratory experience, credit will also be given for the laboratory portions of these courses.*

***Upon presentation of documentation of appropriate laboratory experience, credit will also be given for the laboratories associated with these courses, PHY 241, 242 respectively.*

****KCTCS does not offer courses that are an exact equivalent for the AP subject offered. Appropriate General Education credit is awarded in these cases.*

American Council on Education

Students may receive credit for learning experiences in industry, business, and government as recommended by the American Council on Education (ACE). The recommendations for awarding credit appear in The National Guide to Educational Credit for Training Programs, published by the ACE.

Articulation Agreements

Articulation agreements provide a mechanism to accept and award credit for courses that will transfer toward a credential. Articulation agreements specify the terms and conditions for courses taken at other institutions that will apply to a KCTCS credential, and/or the terms and conditions for courses taken at KCTCS that will apply to credentials or degree programs at other institutions. In either case, the award of applicable credit to the credential is subject to the specific terms of each agreement and all requirements specified in the agreement must be met before credit can be awarded. For information about articulation agreements for KCTCS credentials, contact the college Student Records Office. For information about the availability of articulation agreements that apply to credentials or degree programs at other institutions, consult the college Student Records Office, the Transfer Contacts on pages 59 to 61, KCTCS Rules of the Senate Section VI Appendix D (kctcs.edu/Faculty_and_Staff/Academic_Affairs.aspx), or the Council on Postsecondary Education web site at www.cpe.ky.gov .

Certified Professional Secretary Examination

KCTCS colleges recognize the Certified Professional Secretary Examination of the Institute for Certifying Secretaries of the Professional Secretaries International. Students who successfully pass the Certified Professional Secretary Examination may receive a maximum of 21 credit hours in specified courses. Students must first complete 12 credit hours in residence at the college in which they wish to receive credit.

Guide to Educational Credit by Exam –CPS/CAP Recommendations	Suggested KCTCS Courses
Part I – Office Systems & Technology	
Computer Concepts– 3 credits	OST 105 – Introduction to Information Systems (3)
Computer Information Systems– 3 credits	OST 240 – Software Integration (3)
Part II – Office Administration	
Business Communications – 3 credits	OST 235 Business Communications (3)
Records Management 3 credits	OST 160 Records and Database Management (3)
Part III – Management	
Management & Supervision– 4 credits	BAS 283 – Principles of Management (3)
Human Resource Management – 3 credits	BAS 274 – Human Resource Management (3)
Accounting – 1 credit	ACT 101 – Fundamentals of Accounting
Recommended credit total : 20	**Total credit: 21**

Child Development Associate

After successfully completing one three credit hour IEC course, a student enrolled in the IEC program who holds a current Child Development Associate (CDA) credential from the Council for Professional Recognition will be granted credit for IEC 101, IEC102, and IEC 190. No other courses will be substituted for credit.

Commonwealth Child Care Credential

After successfully completing one three credit hour IEC course, a student enrolled in the IEC program who holds a current Commonwealth Child Care Credential (CCCC) from the State of Kentucky will be granted credit for IEC 101. No other courses will be substituted for credit.

Military School Age (MSA)

After successfully completing one three credit hour IEC course, a student enrolled in the IEC program that holds a current Military School Age (MSA) credential from the Council of Professional Recognition will be granted credit for the following three KCTCS courses: IEC 101, IEC 102 and IEC 250. No other courses will be substituted for credit

College Level Examination Program (CLEP)

KCTCS colleges accept the General and Subject Examinations of the College Level Examination Program (CLEP). The Subject Examinations cover specific material which is common to courses in many colleges and universities. The level of proficiency to earn credit through CLEP is approximately equivalent to that required to earn a "C" in the course.

Guidelines for CLEP General Examinations

CLEP Subject Examination	Scaled Score to Earn Credit	Equivalent Course	Credit Hours
Foreign Languages			
College Level French Language	50-69	FRE 201	3
	70 or above	FRE 201, 202	6
College Level German Language	50-69	GER 201	3
	70 or above	GER 201, 202	6
College Level Spanish Language	50-69	SPA 201	3
	70 or above	SPA 201, 202	6
History and Social Sciences			
American Government	50	POL 101	3
History of the United States I	50	HIS 108	3
History of the United States II	50	HIS 109	3
Introductory Psychology	50	PSY 110	3
Principles of Macroeconomics	50	ECO 202	3
Principles of Microeconomics	50	ECO 201	3
Introductory Sociology	50	SOC 101	3
Western Civilization I: Ancient Near East to 1648	50	HIS 104	3
Western Civilization II: 1648 to the Present	50	HIS 105	3
Social Sciences and History	50	SOC 101	3
Human Growth and Developmental	50	AHS 100	2
Science and Mathematics			
Calculus	50	MAT 174 or MAT 175	4, 5
College Mathematics	50	MAT 146	3

College Algebra	50	MAT 150	3
Precalculus	50	MAT 160	5
Biology	50-59	BIO 112	3
	60-64	BIO 120, BIO 112	6
	65-80	BIO 150, 152	6
General Chemistry	50 or above	CHE 170, 180	6
Natural Science	50	BIO 112	3
Business and Computer Applications			
Principles of Accounting	50	ACC 201, 202	6
Principles of Management	50	BAS 283	3
Principles of Marketing	50	BAS 282	3
Introduction to Business Law	50	BAS 267	3
Information Systems and Computer Applications	50	TRN 146	3
English and Humanities			
American Literature	50	ENG 251	3
Analyzing and Interpreting Literature	50	ENG 161	3
English Literature	50	ENG 161	3
Humanities	50	HUM 120	3
College Composition, College Composition Modular	50	ENG 101	3

Guidelines for Internataional Baccalaureate (IB)

IB Course	Score	Credit Awarded	Credit Statement
Biology HL	4	BIO 152	3 credit hours
Biology SL	4	BIO 112	3 credit hours
Chemistry HL	4	CHE 170, CHE 180	6 credit hours
Chemistry SL	4	CHE 140	3 credit hours
English A: Literature HL	4	ENG 101	3 credit hours
French B HL	5	FRE 201, FRE 201	6 credit hours
French B SL	5	FRE 101, FRE 102	8 credit Hours
History HL	5	HIS 108, HIS 109	6 credit hours
Mathematics HL	5	MA 113	4 credit hours
Mathematics SL	5	MAT 170	3 credit hours
Math Studies SL	5	Technical Math Elective	3 credit hours
Music SL/HL	4	MUS 100	3 credit hours
Physics SL/HL	5	PHY 201*	4 credit hours
Psychology SL	4	PSY 110	3 credit hours
Spanish B HL	5	SPA 201, SPA 202	6 credit hours
Spanish B SL	5	SPA 101, SPA 102	8 credit hours
Theatre Arts HL/SL	4	THA 100	3 credit hours
Visual Art HL/SL	4	ART 100	3 credit hours

**Upon presentation of documentation of appropriate laboratory experience, credit will also be given for the laboratory associated with this course, PHY 202*

Industry Standard Certification Examinations

Military Service Experience

A student may receive course credit in recognition of collegiate level credit completed through DSST (DANTES Subject Standardized Tests). To receive course credit for successful DSST exams, the student must have received a minimum standard score of 46. Credit will be given only upon receipt of an official DSST score report or transcript. A student may receive course credit where appropriate and equivalent courses are available for formal military training as recommended in A Guide to the Evaluation of Educational Experiences in the Armed Services (ACE Guide), published by the American Council on Education.

National Board for Respiratory Care (NBRC) Examination

A student who has passed the NBRC entry-level examination to the Respiratory Care Program will be awarded thirty-seven to thirty-nine (37 – 39) semester hours of credit after completion of at least 15 credit hours

of the general education courses in the approved curriculum. The student must also provide evidence of successful completion of the American Heart Association Basic Life Support course for health care providers.

Special Exam: STEP or Challenge

Institutionally developed and administered exams provide an opportunity to demonstrate mastery of course content and receive credit toward program requirements. The student must be accepted for admission and enrolled in the college and apply for the exam through the Student Records Office. For more information, see "Tuition and Charges."

Dual Credit

KCTCS dual credit is concurrent enrollment in high school and a KCTCS college with credit awarded by both. A high school student may earn both high school and college credit (dual credit) for the same course upon completion of course requirements. College credit will be awarded for courses taken for dual credit with a KCTCS college upon the student's completion of the course requirements, and will become part of the student's official college transcript. The KCTCS assessment and placement and grading policies apply to dual credit courses offered by KCTCS. Additional information about dual credit should is available at the local KCTCS college.

Non-Classroom Learning Experiences

Work Based Learning Experiences

Many of the diploma and degree programs offered through the colleges have Work Based Learning included in the curriculum. Work Based Learning refers to the programs that offer academic credit for degree-related work experience during a specific semester. The experiences and credit awarded vary according to the program's requirements. These experiences must be planned and supervised by the college and the employer to ensure that the work experience contributes to the student's education and career objective. The cornerstone of Work Based Learning is Cooperative Education. Other programs that are considered part of Work Based Learning are Internships, Practicums, and Experiential Learning. These courses afford the student a unique opportunity to integrate formal classroom training with supervised work experience.

Service Learning

Students have the opportunity to enroll in service learning programs which are designed to integrate community service with academic instruction as it focuses on critical and reflective thinking and civic responsibility. Service learning programs involve students in organized community service that addresses local needs, while developing academic skill, sense of civic responsibility, and commitment to the community.

Credit for Prior Learning

Prior Learning Assessment Portfolio students may contact any KCTCS college for information regarding applications for college credit via portfolio.

Modularized Credit Courses

Some KCTCS courses are available in a modularized credit format allowing students to register for courses that are components of the full (or "parent") course. For example, BAS 212 may be taken as a three credit course or students may enroll in BAS 2121, BAS 2122, and BAS 2123 as separate courses which are the equivalent of BAS 212. The sum of the modular credit courses is equal to the full course. The student transcript will display the modularized credit course in the term the student earned the credit and once all components of the full course are earned, the full course will appear on the transcript. Modular Credit Courses are designated as a four digit number. The first three digits are those of the parent course. The last digit is the number of the modular credit segment/component, e.g., XXX 2021, XXX 2022, XXX 2023 or XXX 101A, XXX 101B, XXX 101C. When a student registers for a General Education modularized course, the student must complete all of the courses in that series to fulfill General Education category requirements, e.g., ECO 101 – 3 credits meets the Social & Behavioral Sciences category requirement. If ECO 101 has three modules, ECO 1011, 1012, and 1013, all three ECO 101 modules must be completed before the Social & Behavioral Sciences category requirement will be fulfilled. The student cannot take three modularized courses from three different courses to meet the general education category requirement, e.g., ANT 1011, ECO 1011, and PSY 1101. Some modular courses require students to complete a Learning Contract upon registration which defines the student's responsibilities.

Academic Policies and Rules

Policies Related to Enrollment

Student Load – Full-time Status

Full-time student academic status for the fall and spring term is 12 credit hours. Full-time student academic status for the summer term is 6 credit hours.

Student Load – Maximum Student Load

The maximum load to be carried during any semester by a student (including residence, correspondence, and extension courses) is 19 credit hours or the number of hours specified in the curriculum for the particular semester, whichever is larger.

A student who has attained a grade-point average of 3.0 on a load of at least 15 credit hours for the preceding semester may be permitted by the college president (or designee) to carry a maximum of three additional credit hours, provided the total is not in excess of 22 credit hours for the semester.

Normally, the maximum course load (including residence, correspondence, and extension courses) shall be four credit hours for the four-week intersession, six hours for the five-week session, seven credit hours in a six-week session, or 10 credit hours in the eight-week summer session. A student who has attained a grade point average of 3.0 may be granted permission by the college president (or designee) to carry a maximum of five hours in a four-week session, seven hours in the 5-week session, eight hours in a six-week session, 12 hours in an eight-week session, and fifteen hours in the twelve-week session.

A student on academic probation shall not take more than 15 credit hours in a semester, three credit hours in a four-week intersession, four hours in the five-week session, six credit hours in a six-week summer session, seven credit hours in an eight-week summer session and nine hours in the twelve-week session.

A student may be registered simultaneously at a KCTCS college and at another institution only with the approval of the college president (or designee), the credit hours obtained at the other institution being considered a part of the student's maximum load. If the simultaneous registration has not been authorized, the transfer of credit from the other institution may be denied.

Grading System

The grading system uses a series of letters, to which are assigned grade-point values. The system is based neither on an absolute numerical system nor on a distribution curve, but on the following descriptions:

A: represents exceptionally high achievement. It is valued at four grade points for each credit hour in non-remedial and non-developmental courses.

B: represents high achievement. It is valued at three grade points for each credit hour in non-remedial and non-developmental courses.

C: represents satisfactory achievement. It is valued at two grade points for each credit hour in non-remedial and non-developmental courses.

D: represents the minimum achievement for credit. It is valued at one grade point for each credit hour in non-remedial and non-developmental courses.

E: represents unsatisfactory achievement and indicates failure in the course. It is valued at zero credit hours and zero grade points in non-remedial and non-developmental courses. Credit may be obtained by repeating the entire course.

F: represents unsatisfactory achievement in a course taken on a Pass-Fail basis. It has no value in computing the grade point average. Credit may only be obtained by repeating the entire course. This grade may be used for developmental courses.

AU (Audit): has no value in computing grade-point average. A student who has been admitted to the college may elect to enroll in a course(s) as an auditor, except in selective admissions programs. Auditing courses in a selective admissions program requires admission to the program and availability of space in the courses. With few exceptions, any change from audit to credit by a student fully admitted to a college must be accomplished by the last date to enter a class and any change from credit to audit must be made by mid-term of the semester or session in which the student is enrolled. An audited class may be taken for credit at a later date. Anyone who desires to audit a class must be admitted to the college and officially registered for the course.

I: means that part of the work of the course remains unfinished. It shall be given only when there is a reasonable possibility that a passing grade will result from completion of the work. The instructor and student will discuss the requirements for completion of course with the time limit for completion not to exceed a maximum of one year; failure to do so will result in an automatic change of grade from I to E. Each college shall maintain a record of incomplete grades recorded in courses of that college. This record, completed by the instructor at the time the I grade is reported, shall include: (1) the name and number of the student, (2) the course number and hours of credit, (3) semester or session and year of enrollment, (4) signature of the instructor, (5) a brief statement of the reason(s) for recording the incomplete grade, and (6) an adequate guide for removal of the incomplete grade. In the instructor's absence, the division chairperson (or designee), shall forward to the college president (or designee) the appropriate letter grade to replace the incomplete grade.

W: represents a withdrawal from class without completing course requirements. A student may officially withdraw from any class up to and including the date of mid-term with a W grade. After the date of mid-term and through the last class of the semester or session, any student may officially request to withdraw from a course and receive a W which may be given at the discretion of the instructor. Each instructor shall state on the first or second class meeting the factors to be used in determining if a student will be allowed to withdraw during the discretionary period. An instructor shall not assign a student a W for a class unless the student has officially withdrawn from that class in a manner prescribed by the college. The grade of W may be assigned by the College Appeals Board in cases involving a violation of student academic rights or for academic offenses.

P: represents a satisfactory grade in a course taken on a Pass-Fail basis. The student who receives a P in a course shall be eligible to continue into the next sequential course(s). The grade of P may be assigned by the College Appeals Board in cases involving a violation of student academic rights. It has no value in computing the grade point average. This grade may be used for developmental courses.

MP: represents Making Progress and may be assigned only for developmental courses and means that the student has made significant progress but needs and deserves more time to achieve a passing grade. The student should re-enroll in the course in order to continue advancement to the level of competence set for the course. Grades may be earned following re-enrollment for developmental courses. The grade of MP has no value in computing grade point average.

Pass/Fail: may be selected for a maximum of two elective courses, subject to certain restrictions, by students with at least 30 credit hours and not on academic probation. Courses with these grades can count toward graduation but are not used in calculating grade-point standing. Courses taken on a pass-fail basis shall be limited to those considered as elective in the student's program, and such other courses or types of courses as might be specifically approved. Prerequisites for such courses may be ignored at the student's own hazard. The student is expected to participate fully in the course and take all examinations as though the student were enrolled on a regular basis. Students may not change from a pass-fail basis nor from a regular basis to a pass-fail basis after the last date for entering an organized class. Courses offered only on a pass-fail basis, remedial or developmental, or taken by special examination, shall not be included in the maximum number of elective courses which a student may take under these provisions

Changing Grades: A grade once reported shall not be changed except when the instructor states in writing that an error has been made. The grade change must be submitted by the end of the following semester or session or, in exceptional cases, at the discretion of the president (or designee). However, each respective College Appeals Board may change a grade to P or W in the case of a violation of student academic rights or to a W in the case of an academic offense.

Grade-Point Average (GPA): The GPA on the KCTCS transcript is derived from all courses taken at KCTCS institutions. The grade-point average is the ratio of the total grade points earned to the total credit hours attempted excluding courses taken on a pass/fail basis and courses with grades of W or I. Total grade points are derived by multiplying the number of credit hours for the course by the number of grade points assigned to the grade earned: A = 4, B = 3, C = 2, D =1, E = 0.

Reporting Final Grades: The final grades for a course shall be filed with the office of the college president (or designee) by such date as determined by the academic calendar.

Academic Probation, Academic Suspension, and Reinstatement

Academic Probation: A student earning a cumulative grade point average below a 2.0 at the end of a term shall be placed on academic probation. A student shall be removed from academic probation by earning at least a 2.0 cumulative grade point average.

Academic Suspension (Dismissal): If a student is placed on academic probation for two consecutive terms (which is noted on the transcript as

"subject to dismissal" the second time) and does not earn either a cumulative GPA or a term GPA of at least a 2.0 in the third term, the student shall be academically suspended. Non-enrollment has no effect on probation status. The president (or designee) may grant an exception based upon an individual's case. A student on academic suspension may not enroll in courses which count toward a KCTCS degree.

Reinstatement: A student who has been academically suspended may be reinstated by the president (or designee) after remaining out of the college for at least one 16-week semester and providing evidence of ability to perform at the level required. A student who has been academically suspended shall, upon reinstatement, be placed on academic probation and be subject to academic suspension if the student has failed to earn a current term GPA of 2.0 during the first term of reinstatement. Upon a second suspension, a student may be reinstated by the president (or designee) after remaining out of the college for at least two 16-week semesters and providing evidence of ability to perform at the level required.

Repeating a Course

A student may repeat a course for the purpose of improving a grade. The course must be repeated with the same grade option as the original enrollment in the course. The highest grade earned in a completed course shall constitute the official grade for the course and will be the only grade included within the cumulative GPA. Credit shall count only once for a KCTCS credential. If a student has been dropped from an occupation or technical program, course enrollment may be dependent upon readmission to the program. After a student has completed the same course twice, a division chair (or designee) in consultation with the instructor may refuse to approve a third registration in the same course, including those offered by correspondence, extension, and distance learning technology. Subject to the approval of the division chair (or designee), a student may receive approval for a substitution of comparable courses (e.g. MAT 150 may be taken as a repeat option for MA 109 and vice versa.). NOTE: A parent course cannot be repeated using modules. Students who have received passing grade in a parent course are not eligible to enroll in any module of that parent course.

Final Exams

Any student with more than two exams scheduled on one day as described in the college's final exam schedule shall be entitled to have one of those exams rescheduled. The student must submit a petition for rescheduling in writing to the instructor no later than one week prior to the last class meeting.

Dean's List

The Dean's List recognizes the academic excellence of students who have earned an overall semester GPA of 3.5 or higher in courses numbered 100 or above. Honorary certificates of merit are generally awarded to students who have achieved this distinction.

Academic Bankruptcy (Readmission after Two or More Years)

A student who has been readmitted after having remained out of the KCTCS colleges for a period of two or more years, and who has completed at least 12 credit hours in college-level courses with a GPA of 2.0 or better after readmission, may choose to have none of the course work attempted in the colleges prior to the interruption included in the computation of the student's GPA. The calculation of the GPA after the student declares bankruptcy begins with the semester of readmission. A student who has elected not to count past work in the computation of his or her GPA will continue to receive credit for those courses in which credit was earned with a grade of A, B, C, D, or P prior to readmission, without including those grades in the computation of the student's GPA.

A student who has completed a credential and re-enrolls may not apply the academic bankruptcy rule to courses taken for the credential already completed. A student may only use the academic bankruptcy option once.

Policies Related to Graduation

Graduation Requirements

For the Associate in Arts, Associate in Science, Associate in Fine Arts, and Associate in Applied Science degrees, regardless of the time the student has attended the college, at least 25 percent of the approved curriculum credits must be completed at the KCTCS college granting the degree. For a certificate or diploma, at least 25 percent of the approved curriculum credits must be completed at the college granting the credential Students seeking Associate in Arts, Associate in Science, Associate in Fine Arts, or Associate in Applied Science degrees or Diplomas must have a minimum cumulative GPA of 2.0 in order to be eligible for graduation. To be eligible for a certificate, a student must satisfactorily complete an approved curriculum with a grade point average of at least 2.0 in the courses required for the certificate.

In order to be eligible to receive KCTCS credentials, students must satisfactorily complete the minimum number of credits required for that credential, including the general education requirements as specified in the KCTCS Board of Regents Policies 4.11 and 4.12 and program requirements, with a cumulative grade point average of at least 2.0 and complete the college's application for graduation within the posted deadline for the term. In order to be eligible for:

- Associate in Arts, Associate in Science, Associate in Fine Arts, Associate in Applied Science, and Associate in Applied Technology degrees, students must satisfactorily complete 60 credits, including the general education requirements as specified in the KCTCS Board of Regents Policies 4.11 and 4.12 and program requirements, with a cumulative grade point average of at least 2.0.
- Diplomas, student must satisfactorily complete a minimum of 36 hours including the general education requirements as specified by the KCTCS Board of Regents Policies 4.11 and 4.12 and program requirements, with a cumulative grade point average of at least 2.0.
- Certificates, students must satisfactorily complete an approved curriculum with a grade point average of at least 2.0 in the courses required for the certificate.
- Course substitutions may be made by the college president (or designee) on an individual basis with the advice of the appropriate division chairperson.

Specific information about the requirements for these programs is available below in the Academic Credentials Awarded section.

Graduation With Honors

Students who have completed at least 45 credit hours of work toward degree completion or 30 credit hours of work toward diploma completion in the KCTCS colleges shall be graduated "With High Distinction" if they attain a grade-point average of 3.60 or higher on all work attempted. Students who have completed at least 45 credit hours of work toward degree completion or 30 credit hours of work toward diploma completion in the KCTCS colleges shall be graduated "With Distinction" if they attain a GPA of 3.40-3.59 on all work attempted.

Multiple Associate Degrees

A student will be eligible for an additional degree when the student has completed the requirements of the second curriculum including a minimum of six credit hours relevant to the second degree and beyond the

requirements for the first degree. In no case will a degree be granted for the completion of a second option in a program. The completion of a second option, however, will be recorded on the transcript.

Kentucky Community and Technical College Guarantee

KCTCS colleges offer employers of graduates the following guarantee:

The KCTCS colleges guarantee employers that graduates have demonstrated competence in the skills listed on the approved task lists that represent industry validated specifications for each occupational program. Should a former student be considered by the employer to be performing below a satisfactory level on any skill on the approved task list, the colleges agree to provide specific retraining at no charge to the employee or employer. This guarantee extends for two years from the date of graduation.

The guarantee applies to all college graduates of occupational/technical programs who are employed in their field of training. The program enhances economic development efforts by guaranteeing Kentucky's businesses and industries access to a skilled work force.

Academic Credentials Awarded

Associate in Arts (AA) and Associate in Science (AS)

General Education Core Requirements	**AA (2401015000)**	**AS (2401016000)**
Written Communications	6 credit hours	6 credit hours
Students who complete ENG 105 must take an additional 3 credit hours of General Education from any of the General Education categories		
Oral Communications	3 credit hours	3 credit hours
Arts and Humanities	6 credit hours	6 credit hours
One course must be selected from Humanities and one course from Heritage		
Quantitative Reasoning	3 credit hours	6 credit hours
Natural Sciences	3 credit hours	6 credit hours
One science course must include a laboratory experience.		
Social and Behavioral Sciences	9 credit hours	6 credit hours
Two disciplines must be represented and different from those in the Arts and Humanities category.		
Quantitative Reasoning OR		
Natural Sciences	3 credit hours	
Subtotal General Education Core	**33 credit hours**	**33 credit hours**
Associate in Arts Requirements	**12 credit hours**	
Select courses from headings in the Core Categories and/or Foreign Language (see pages 74 - 76). At least 6 credit hours must be selected from ***Arts and Humanities*** *and/or* ***Social and Behavioral Sciences*** *and/or* ***Foreign Language****. Students are advised to choose hours to satisfy pre-major requirements at the institution to which they are transferring.*		
Associate in Science Requirements	**12 credit hours**	
Select courses from headings in the Core Categories and/or Foreign Language (see pages 74 - 76). At least 6 credit hours must be selected from ***Quantitative Reasoning*** *and/or* ***Natural Sciences.*** *Students are advised to choose hours to satisfy pre-major requirements at the institution to which they are transferring.*		
Electives	**15 credit hours**	**15 credit hours**
Students are advised to choose hours to satisfy pre-major requirements at the institution to which they are transferring.		
Total Credit Hours	**60 Credit Hours**	**60 Credit Hours**

Degree requirements: 1) completion of minimum of 60 credit hours, 2) minimum cumulative 2.0 GPA, 3) minimum of 15 credit hours earned at the institution awarding the degree, 4) cultural studies course, and 5) demonstration of computer/digital literacy.

[1]*Courses chosen to satisfy General Education requirements must be selected from an approved list which may be found in the KCTCS catalog at http://legacy.kctcs.edu/catalog/.*

[2]*A course used to fulfill one category cannot be used to fulfill another category.*

Transitional courses (courses numbered 001-099) cannot be used to satisfy graduation requirements.

The General Education Transfer Policy is in place between all public colleges and universities in Kentucky, and the KCTCS policy regarding general education certification is outlined in the KCTCS Rules of the Senate, Section V 5.0.4. For more information see page 61.

Associate in Fine Arts (AFA)

An Associate in Fine Arts (AFA) degree is designed to transfer into a Baccalaureate of Fine Arts (BFA) program at a four-year institution. It consists of a general education requirement of 24 credit hours, a fine arts core of 18 credit hours, and 18 additional credit hours of concentration for a 60 credit hour minimum.

General Education Component:	
Written and Oral Communications	9 credit hours
Arts and Humanities	3 credit hours
The course chosen to satisfy this requirement must be from a discipline other than the discipline in the Fine Arts Core and/or concentration.	
Quantitative Reasoning	3 credit hours
Natural Sciences	3 credit hours
Must include a laboratory experience for general education certification in the Natural Sciences category.	
Social and Behavioral Sciences	6 credit hours
Total General Education	**24 credit hours**
Fine Arts Core	
Sub-Total	**18 credit hours**
Concentration	
Sub-Total	**18 credit hours**
Total	**60 credit hours**

Degree requirements: 1) completion of minimum of 60 credit hours, 2) minimum cumulative 2.0 GPA, 3) minimum of 15 credit hours earned at the institution awarding the degree, 4) cultural studies course, and 5) demonstration of computer/digital literacy.

[1]*Courses chosen to satisfy General Education requirements must be selected from an approved list which may be found in the KCTCS catalog at* http://legacy.kctcs.edu/catalog/.

[2]*A course used to fulfill one category cannot be used to fulfill another category.*

Transitional courses (courses numbered 001-099) cannot be used to satisfy graduation requirements.

Associate in Applied Science (AAS)

General education component 15

A student must complete a minimum of 15 credit hours to fulfill the general education requirement. General education credits must meet the following distribution:

Quantitative Reasoning	3 credit hours
Natural Sciences	3 credit hours
Social/Behavioral Sciences	3 credit hours
Heritage/Humanities	3 credit hours
Written Communication	3 credit hours

The above are minimum general education requirements; additional hours may be required in specific program curricula.

Technical and Support Component 45 - 53

General Education and Technical and Support Components must be distributed so that programs do not exceed 68 credit hours.

Total Credit Hours 60 - 68

AAS degree programs should incorporate multiple exit points, i.e. awarding certificates and diplomas, when possible.

Degree requirements: (1) minimum cumulative GPA of 2.0, (2) minimum of 25% of credit hours required for the degree must be earned at the institution awarding the degree, and (3) demonstration of digital literacy.

Transitional courses (courses numbered 001-099) cannot be used to satisfy graduation requirements.

Diploma

A diploma program is designed to prepare students for technical employment within a one- to two-year period (36-60 credit hours). The total number of credit hours for the diploma must not exceed those required for a degree in the same program of study. A prescribed program of technical and general education courses is designed to prepare students for a specific job title. Diploma programs provide preparation for a specific occupation, credit toward an associate degree, and continued training opportunities for certificate program graduates. The diploma program contains general education courses emphasizing the skills identified in the SCANS (Secretary's Commission on Achieving Necessary Skills) report that are critical to entry-level workforce success for persons prepared at the diploma level.

1. Diplomas will address appropriate general education competencies.
2. Diploma curricula will be approved through the KCTCS Curriculum process.
3. Diplomas will be applicable toward at least one associate degree. (Courses designated "Diploma Only" on the General Education list will not apply toward an Associate Degree)
4. General education 6 credit hour requirement for diplomas in areas 1-2 as follows:

   Area 1: Written/Oral Communications, Humanities, or Heritage 3 credit hours

   Area 2: Social/Behavioral Sciences, Natural Sciences, or Quantitative Reasoning 3 credit hours

   Additional courses could be used for other areas in approved curricula for diplomas but may not meet general education transfer requirements.

   The above are minimum general education requirements; additional hours may be required in specific program curricula.

Technical & Support* 30 - 54

Total Credit Hours 36 - 60

*The Technical and Support requirements must include a work experience component of 1-12 credit hours.

Graduation requirements include (1) Minimum cumulative GPA of 2.0, (2) demonstration of digital literacy, and (3) minimum of 25% of diploma requirements earned at the institution awarding the diploma.

Transitional courses (courses numbered 001-099) cannot be used to satisfy graduation requirements.

Certificate

The primary purpose and features of certificate programs of study are to provide marketable, entry-level skills. Certificates qualify students to take external licensure, vendor-based, or skill standards examinations in the field. If standardized external exams are not available in the field of study, certificates prepare students at skill levels expected of employees in an occupation found in the local economy.

1. Certificates will address one or more general education competencies.
2. Certificate curricula will be approved through the KCTCS Curriculum process.
3. Certificates will be applicable toward at least one associate degree.

The above are minimum general education requirements; additional hours may be required in specific program curricula.

Requirements for a certificate are applicable to the requirements of a diploma or associate degree in the same or a related field of study. Requests for exceptions must include appropriate documentation to justify approval. Certificates may contain general education courses emphasizing the skills identified in the Secretary's Commission on Achieving Necessary Skills (SCANS) report that are critical to entry-level workforce success for persons prepared at the certificate level and associated with the diploma or associate degree program. SCANS identified three foundation skills and five competencies necessary for success in the workplace.

Foundation Skills

Basic Skills: reading, writing, arithmetic and mathematics, listening, and speaking;

Thinking Skills: thinking creatively, making decisions, solving problems, knowing how to learn, and reasoning;

Personal Qualities: individual responsibility, self-esteem, sociability, self-management, and integrity/honesty.

Competencies

Resources: allocating time, money, materials, space, and staff;

Interpersonal Skills: working on teams, teaching others, serving customers, leading, negotiating, and working well with people from culturally diverse backgrounds;

Information: acquiring and evaluating data, organizing and maintaining files, interpreting and communicating, and using computers to process information;

Systems: understanding social, organizational, and technological systems, monitoring and correcting performance, and designing or improving systems;

Technology: selecting equipment and tools, applying technology to specific tasks, and maintaining and troubleshooting technologies.

Total Credit Hours **12 – 30**

Graduation requirements: (1) minimum grade of C in each course required for the certificate and (2) minimum of 25% of certificate requirements earned at the institution awarding the degree.

Transitional courses (courses numbered 001-099) cannot be used to satisfy graduation requirements.

Continuing Education Certificate

Students shall be awarded a continuing education certificate when they have successfully completed a continuing education course or set of courses.

Specialized Training

Adult Agriculture

Short-term adult upgrade classes in agriculture are offered at selected sites. These classes are designed to help young and adult farmers, as well as individuals employed in agribusiness, keep up with the constantly changing technology in the field of agriculture. The program provides on-the-farm and on-the-job supervision year-round with organized instructional classes conducted in the late fall and winter. Apprenticeship

Apprenticeship program registration is the responsibility of the Kentucky State Apprenticeship Council in cooperation with the United States Department of Labor, Bureau of Apprenticeship Training. Application must be made through an employer, a labor union or a joint apprenticeship committee. Verify with the KCTCS college that it provides the minimum 144 hours per year of supplemental related instruction required of the apprenticeship program. Additional information may be obtained by calling the Kentucky Apprenticeship Council or the United States Department of Labor, Bureau of Apprenticeship Training.

Continuing Education Courses

Continuing education courses can be either credit or non-credit and are designed to meet the needs of the labor market and persons preparing to enter the workforce. They can also supplement knowledge and skills for initial employment or job advancement. They are developed to meet the lifelong learning needs of the general public by providing short-term training, retraining, or upgrading of skills for employment or job advancement.

Customized Industry Training

At the request of business and industry, Community and Economic Development Coordinators (CED) assist in the development and implementation of customized training for prospective and current employees. A specialized training agreement is developed that specifies the duties and responsibilities of the college and the company and may include the awarding of college credit. Contact the CED Coordinator at the local college.

Fire/Rescue Training

The Fire/Rescue Science Technology Program will prepare you for the challenges facing today's emergency responders. In the program you will learn the skills of fire suppression and prevention, technical rescue, hazardous materials, emergency medical care, and leadership. This program is beneficial whether you are seeking a career in emergency services (Fire, Rescue, EMS or Emergency Management) or if you are already involved in providing fire, rescue or EMS services in your community.

Students may enter the program with or without experience in emergency services. The degree, certificate, and diploma programs that are offered can help you in obtaining employment in various emergency service fields, or if you are already a firefighter, help you get that promotion you have been waiting for. Classes are offered through State Fire/Rescue Training and may be offered in various formats such as: Web courses, hybrid courses, and traditional classroom offerings. For more information regarding this program, contact your local State Fire/Rescue Training Area Office.

Fire Rescue Training for Business, Industry and Municipal Government

State Fire Rescue Training provides a full range of Emergency Services Training for Business, Industry and Municipal Government entities. Contact the Fire Rescue office serving your area for more information about the training available to your facility.

Emergency Medical Technician Certificate

Students in the Emergency Medical Technician program are instructed in the proper care of sick and injured patients. Students are trained to treat victims suffering from traumatic and medical emergencies such as broken bones, puncture wounds, cardiac, and respiratory emergencies, vehicle accidents and more. This course meets the standards set forth by the US Department of Transportation National Standard Curriculum for EMT-Basic and the Kentucky Board of Emergency Medical Services. Students that successfully complete the course and its requirements will be awarded a certificate for Emergency Medical Technician, and will be prepared to challenge the certification examination process set forth by the Kentucky Board of Emergency Medical Services.

For specific program information see page 144.

State Fire Rescue Training Coordinators and Contact Information

West Kentucky Community & Technical College (Area 1)
Charles Lott, Coordinator
P. O. Box 8227
5200 Alben Barkley Drive
Paducah, KY 42002-8227
(800#) 888-306-7901
charles.lott@kctcs.edu
Counties: Ballard, Calloway, Carlisle, Fulton, Graves, Hickman, Livingston, Marshall, McCracken

Madisonville Community College (Area 2)
Mark Boaz, Coordinator
2001 Training Center Drive
Princeton, KY 42445
(800#) 888-306-7986
mark.boaz@ktcts.edu
Counties: Caldwell, Christian, Crittenden, Hopkins, Lyon, Todd, Trigg

Owensboro Community & Technical College (Area 3)
Jimmy VanCleve, Coordinator
P. O. Box 700
1300 HWY 136E
Calhoun, KY 42327
(800#) 888-306-8015
jimmy.vancleve@kctcs.edu
Counties: Daviess, Hancock, Henderson, McLean, Muhlenberg, Ohio, Union, Webster

Southcentral Kentucky Community and Technical College (Area 4)
John Weatherbee, Coordinator
825 Morgantown Road
Bowling Green, KY 42101
(800#) 888-234-5760
john.weatherbee@kctcs.edu
Counties: Allen, Barren, Butler, Edmonson, Hart, Logan, Metcalfe, Monroe, Simpson, Warren

Elizabethtown Community & Technical College (Area 5)
Rusty Todd, Coordinator
630 College Street Road
Elizabethtown, KY 42701
(800#) 888-234-7201
russelle.todd@kctcs.edu
Counties: Breckinridge, Grayson, Hardin, Larue, Marion, Meade, Nelson, Washington

Jefferson Community & Technical College (Area 6)
Rick Larkins, Coordinator
1361 Frankfort Road
Shelbyville, KY 40065
(800#) 888-306-8064
rick.larkins@kctcs.edu
Counties: Bullitt, Henry, Jefferson, Oldham, Shelby, Spencer, Trimble

Gateway Community & Technical College (Area 7)
Bill Birkle, Coordinator
P. O. Box 76488
90 Campbell Drive
Highland Heights, KY 41076
(800#) 888-306-8101
bill.birkle@kctcs.edu
Counties: Boone, Campbell, Carroll, Gallatin, Grant, Kenton, Owen, Pendleton

Maysville Community & Technical College/Rowan Campus (Area 9)
Duane Suttles, Coordinator
99 Lake Park Drive
Morehead, KY 40351
(800#) 888-301-2946
duane.suttles@kctcs.edu
Counties: Bath, Bracken, Elliott, Fleming, Lewis, Mason, Menifee, Montgomery, Morgan, Robertson, Rowan

Ashland Community & Technical College (Area 10)
Mark Hammond, Coordinator
12307 Midland Trail Road
Ashland, KY 41102
(606) 585-0255
mark.hammond@kctcs.edu
Counties: Boyd, Carter, Greenup, Lawrence

Big Sandy Community & Technical College (Area 11)
Greg Gray, Coordinator
116 Main Street
Paintsville, KY 41240
(800#) 888-302-8935
greg.gray@kctcs.edu
Counties: Floyd, Johnson, Magoffin, Martin, Pike

Hazard Community & Technical College (Area 12)
Greg Reams, Coordinator
45 Gorman Hollow Road
Hazard, KY 41701
(800#) 888-234-6759
greg.reams@kctcs.edu
Counties: Breathitt, Knott, Lee, Leslie, Letcher, Owsley, Perry, Wolfe

Somerset Community College/Laurel Campus (Area 13)
Chantz Mcpeek, Coordinator
1791 Barbourville Street
London, KY 40741
(800#) 888-234-0100
chantz.mcpeek@kctcs.edu
Counties: Bell, Clay, Harlan, Jackson, Knox, Laurel, Rockcastle, Whitley

Somerset Community College (Area 14)
Josh Whitis, Coordinator
219 Industry Dr
Jamestown, KY 426269
(606) 219-2243
josh.whitis@kctcs.edu
Counties: Adair, Casey, Clinton, Cumberland, Green, McCreary, Pulaski, Russell, Taylor, Wayne

Bluegrass Community & Technical College/Lawrenceburg Campus (Area 15)
Brian Steele, Coordinator
KY Fire Commission
1355 Old Frankfort Pike
Lexington, KY 40504
(888) 234-3961
Counties: Anderson, Bourbon, Boyle, Clark, Estill, Fayette, Franklin, Garrard, Harrison, Jessamine, Lincoln, Madison, Mercer, Nicholas, Powell, Scott, Woodford

Other Training Options

In addition to full-time programs, KCTCS colleges provide short-term training courses to meet specific labor force needs and demands. Contact the local college for a list of short-term training programs and schedules.

General Education Requirements

Competencies will be met at the level appropriate to the credential.

A general education core curriculum will enable KCTCS colleges to graduate men and women who are intellectually flexible, articulate, reflective, creative, and prepared for continuous learning. For all students, this implies some understanding of the value of higher education and the world of work and career fields related to their own abilities, interests, and needs. The general education core competencies will enable students to develop their own values, pursue goals, and contribute to the political, moral, social, and cultural enrichment of society.

General Education Competencies:

Students should prepare for twenty-first century challenges by gaining:

A. Knowledge of human cultures and the physical and natural worlds through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts.
B. Intellectual and practical skills, including
   - inquiry and analysis
   - critical and creative thinking
   - written and oral communication
   - quantitative literacy
   - information literacy
   - teamwork and problem solving
C. Personal and social responsibility, including
   - civic knowledge and engagement (local and global)
   - intercultural knowledge and competence
   - ethical reasoning and action
   - foundations and skills for lifelong learning
D. Integrative and applied learning, including synthesis and advanced accomplishment across general and specialized skills.

Written Communication

Diploma
- TEC 200 Technical Communications
- OST 108 Editing Skills for Office Professionals
- Any Writing course approved for the AAS, AA, or AS

AAS, AA, AS, AFA
- ENG 101 Writing I 3
- ENG 102 Writing II 3
- ENG 105 Writing: An Accelerated Course 3

Oral Communications

Diploma, AAS, AA, AS, AFA
- COM 181 Basic Public Speaking 3
- COM 205 Business and Professional Communication 3
- COM 252 Intro to Interpersonal Communications 3
- COM 281 Communication in Small Group 3
- COM 287 Persuasive Speaking 3

Quantitative Reasoning

Diploma
- OST 213 Business Calculations for the Office Professional 3
- Any mathematics course approved for the AAS, AA, AS, or AFA

AAS
- MAT 105 Business Mathematics 3
- MAT 110 Applied Mathematics 3
- MAT 116 Technical Mathematics 3
- MAT 126 Technical Algebra and Trigonometry 3
- Any mathematics course listed below

AA, AFA
- MAT 146 Contemporary College Mathematics 3
- Any mathematics course listed below

AS
- MAT 150 College Algebra 3
- MAT 154 Trigonometry 2
- MAT 155 Trigonometry 3
- MAT 159 Analytic Geometry and Trigonometry 4
- MAT 160 Precalculus 5
- MAT 165 Finite Mathematics and its Applications 3
- MAT 170 Brief Calculus with Applications 3
- MAT 174 Calculus I 4
- MAT 175 Calculus I 5
- MAT 184 Calculus II 4
- MAT 185 Calculus II 5
- MAT 206 Mathematics for Elementary and Middle School Teachers II 3
- MAT 261 Introduction to Number Theory 3
- MAT 275 Calculus III 4
- MAT 285 Differential Equations 3
- STA 210 Statistics: A Force in Human Judgment 3
- STA 220 Statistics 3

Natural Sciences

Diploma
- PHX 150 Introductory Physics 3
- Any Science course approved for the AAS, AA, AS, or AFA

AAS, AA, AFA, AS
- ANA 209 Principles of Human Anatomy 3
- AST 101 Frontiers of Astronomy 3
- AST 155/BIO 155 Astrobiology 3
- AST 191 The Solar System 3
- AST 192 Stars, Galaxies, and the Universe 3
- AST 195 Introductory Astronomy Laboratory* 1
- BIO 112 Introduction to Biology 3
- BIO 113 Introduction to Biology Lab* 1
- BIO 114 Major Discoveries in Biology 3
- BIO 115 Biology Laboratory I* 1
- BIO 116 Biology II 3
- BIO 117 Biology Laboratory II* 1
- BIO 118 Microbes and Society 3
- BIO 120 Human Ecology 3
- BIO 121 Introduction to Ecology Laboratory* 1
- BIO 122 Introduction to Conservation Biology 3
- BIO 124 Principles of Ecology 3
- BIO 130 Aspects of Human Biology 3
- BIO 135 Basic Anatomy and Physiology with Laboratory* 4
- BIO 137 Human Anatomy and Physiology I* 4
- BIO 139 Human Anatomy and Physiology II* 4
- BIO 140 Botany 3
- BIO 141 Botany with Laboratory* 4
- BIO 142 Zoology 3
- BIO 143 Zoology with Laboratory* 4
- BIO 144 Insect Biology 3
- BIO 150 Principles of Biology I 3
- BIO 151 Principles of Biology Laboratory I* 2
- BIO 152 Principles of Biology II 3
- BIO 153 Principles of Biology Laboratory II* 2
- BIO 155/AST 155 Astrobiology 3
- BIO 209 Introductory Microbiology Lab* 2
- BIO 220 The Genetic Perspective 3
- BIO 225 Medical Microbiology 4
- BIO 226 Principles of Microbiology 3
- BIO 227 Principles of Microbiology with Laboratory* 5
- CHE 120 Chemistry in Society 3
- CHE 125 The Joy of Chemistry Laboratory* 1
- CHE 130 Introductory General and Biological Chemistry* 4
- CHE 140 Introductory General Chemistry 3
- CHE 145 Introductory General Chemistry Laboratory* 1
- CHE 150 Introduction to Organic and Biological Chemistry* 3
- CHE 155 Intro to Organic and Biological Chemistry Laboratory* . 1
- CHE 170 General College Chemistry I 4
- CHE 175 General College Chemistry Laboratory I* 1
- CHE 180 General College Chemistry II 4
- CHE 185 General College Chemistry Laboratory II* 1
- CHE 220 Analytical Chemistry* 5
- CHE 270 Organic Chemistry I 3
- CHE 275 Organic Chemistry Laboratory I* 2
- CHE 280 Organic Chemistry II 3
- CHE 285 Organic Chemistry Laboratory II* 2
- EST 150 Introductory Ecology* 4
- EST 160 Hydrological Geology 3
- GEO 130 Earth's Physical Environment 3
- GEO 251 Weather and Climate 3
- GLY 101 Physical Geology 3
- GLY 102 Historical Geology 3
- GLY 110 Environmental Geology 3
- GLY 111 Laboratory for Physical Geology* 1
- GLY 112 Laboratory for Historical Geology* 1
- GLY 114 Environmental Geology Laboratory* 1
- GLY 130 Dinosaurs and Disasters: A Brief History of the Vertebrates 3
- GLY 131 Dinosaur Laboratory* 1
- GLY 220 Principles of Physical Geology* 4
- PHY 151 Introductory Physics I 3
- PHY 152 Introductory Physics II 3
- PHY 160 Physics and Astronomy for Elementary Teachers* 3
- PHY 161 Introductory Physics Laboratory I* 1
- PHY 162 Introductory Physics Laboratory II* 1
- PHY 171 Applied Physics * 4
- PHY 172 Physics for Health Science* 2
- PHY 201 College Physics I 4
- PHY 202 College Physics Lab I* 1
- PHY 203 College Physics II 4
- PHY 204 College Physics Lab II* 1
- PHY 231 General University Physics I 4
- PHY 232 General University Physics II 4
- PHY 241 General University Physics I Laboratory* 1
- PHY 242 General University Physics II Laboratory* 1
- SCI 295 Scientific Investigations 3

*Course satisfies the General Education requirement for a laboratory experience.

Social and Behavioral Sciences

Diploma
- EFM 100 Personal Financial Management 3
- WPP 200 Workplace Principles 3
- Any Social Interaction course approved for the AAS, AA, AS, or AFA

AAS, AA, AS, AFA
- AGR 101 The Economics of Food and Agriculture 3
- ANT 101 Introduction to Anthropology 3
- ANT 130/REL 130 Introduction to Comparative Religion 3
- ANT 160 Cultural Diversity in the Modern World 3
- ANT 220 Introduction to Cultural Anthropology 3
- ANT 221 Native People of North America 3
- ANT 235 Food and Culture 3
- ANT 241 Origins of Old World Civilizations 3

ANT 242 Origins of New World Civilizations..... 3
COM 101 Introduction to Communications 3
COM 249 Mass Media Communication 3
COM 254 Intro to Intercultural Communications 3
ECO 101 Contemporary Economic Issues..... 3
ECO 150 Introduction to Global Economics.....3
ECO 201 Principles of Microeconomics 3
ECO 202 Principles of Macroeconomics..... 3
FAM 252 Introduction to Family Science 3
FAM 253 Human Sexuality: Development, Behavior, and Attitudes 3
FLK 280 Cultural Diversity in the US 3
GEN 140 Development of Leadership..... 3
GEN 225 Lifelong Learning Applications 3
GEO 152 Regional Geography of the World 3
GEO 160 Lands and Peoples of the Non-Western World 3
GEO 172 Human Geography 3
GEO 210 Pollution, Hazards and Environmental Management 3
GEO 222 Cities of the Worlds 3
GEO 240 Geography and Gender 3
HUM 135 Introduction to Native American Literature2 3
HUM 202 Survey of Appalachian Studies I..... 3
HUM 203 Survey of Appalachian Studies II..... 3
HUM 204 Appalachian Seminar..... 3
HUM 221 Contemporary Perspectives on Peace and War..... 3
POL 101 American Government 3
POL 210 Introduction to European Politics: East and West..... 3
POL 212 Culture and Politics in the Third World..... 3
POL 235 World Politics 3
POL 255 State Government..... 3
PSY 110 General Psychology..... 3
PSY 180 Human Relations..... 3
PSY 185 Human Potential 3
PSY 230 Psychosocial Aspects of Death and Dying 3
PSY 223 Developmental Psychology..... 3
PSY 297 Psychology of Aging 3
PSY 298 Essentials of Abnormal Psychology..... 3
RAE 120 Introduction to Chinese Culture..... 3
REL 101 Introduction to Religious Studies 3
REL130 Introduction to Comparative Religion..... 3
SOC 101 Introduction to Sociology..... 3
SOC 151 Social Interaction..... 3
SOC 152 Modern Social Problems..... 3
SOC 220 The Community 3
SOC 235 Inequality in Society 3
SOC 249 Media, Society, and Culture 3
SOC 260 Population, Resources and Change..... 3
SPA 115 Hispanic Culture: (Country or Region) 3
SUS 101 Introduction to Sustainability 3
SUS 102 Sustainable Built Environment..... 3
SUS 201 Sustainable Societies 3
SUS 202 Sustainable Urban Systems 3
SWK 275 The Family 3
WGS 200 Introduction to Women's and Gender Studies in the Social Sciences..... 3

1. A student may not receive credit for both ANT 130 and REL 130.

2. May be used to fulfill either Social and Behavioral Sciences or Arts & Humanities competency, but may not be used to fulfill both general education categories.

Arts and Humanities

Heritage

Diploma, AAS, AA, AS, AFA

FLK 276 Introduction to Folk Studies 3
HIS 101 World Civilization I..... 3
HIS 102 World Civilization II..... 3
HIS 104 A History of Europe Through the Mid-Seventeenth Century..... 3
HIS 105 A History of Europe from the Mid-Seventeenth Century to the Present..... 3
HIS 106 Western Culture: Science and Technology I 3
HIS 107 Western Culture: Science and Technology II 3
HIS 108 History of the U.S. Through 1865 3
HIS 109 History of the U.S. Since 1865 3
HIS 120 The World at War 1939-45 3
HIS 202 History of British People to the Restoration 3
HIS 203 History of British People Since the Restoration 3
HIS 206 History of Colonial Latin America..... 3
HIS 207 History of Modern Latin America, 1810 to present 3
HIS 215 Historical Perspectives on Prisons and Police Work 3
HIS 220 Native American History: Pre-Contact to 1865..... 3
HIS 221 Native American History: 1865 to Present..... 3
HIS 240 History of Kentucky 3
HIS 247 History of Islam and Middle East Peoples, 500-1250 A.D..... 3
HIS 248 History of Islam and Middle East Peoples, 1250 to Present..... 3
HIS 254 History of Sub-Saharan Africa 3
HIS 260 African American History to 1865..... 3
HIS 261 African American History 1865 - Present 3
HIS 265 History of Women in America..... 3
HIS 270 Ancient Europe..... 3
HIS 271 Medieval Europe..... 3
HIS 295 East Asia to 1800..... 3
HIS 296 History of Asia II..... 3

Humanities

Diploma, AAS, AA, AS, AFA

ANT 130/REL 130 Introduction to Comparative Religion..... 3
ART 100 Introduction to Art..... 3
ART 104 Introduction to African Art 3
ART 105 Ancient Through Medieval Art History 3
ART 106 Renaissance Through Modern Art History 3
ART 108 Introduction to World Art..... 3
ART 201 Ancient Art History 3
ART 202 Medieval Art History.....3
ART 203 Renaissance Art History 3
ART 204 Modern Art History..... 3
ART 205 African American Art 3
ENG 135 Greek and Roman Mythology in Translation 3
ENG 161 Introduction to Literature 3
ENG 221 Survey of English Literature I..... 3
ENG 222 Survey of English Literature II 3
ENG 230 Introduction to Literature (Subtitle Required) 3
ENG 231 Literature and Genre (Subtitle)..... 3
ENG 232 Literature and Place (Subtitle Required)..... 3
ENG 233 Literature and Identities (Subtitle Required)..... 3
ENG 234 Introduction to Women's Literature 3
ENG 251 Survey of American Literature I..... 3
ENG 252 Survey of American Literature II 3
ENG 261 Survey of Western Literature from the Greeks through the Renaissance 3
ENG 262 Survey of Western Literature from 1660 to the Present 3
ENG 264 Major Black Writers..... 3
ENG 270 The Old Testament as Literature..... 3
ENG 271 The New Testament as Literature..... 3
ENG 281/HUM 281 Introduction to Film 3
ENG 282/ HUM 282 International Film Studies 3
FLK 276 Introduction to Folk Studies 3
GEN 125 Applied Meta-Thinking 3
HNR 101 Introduction to Contemporary Thought.....3
HON 101 The Ancient World 3
HON 102 The Medieval and Renaissance World 3
HON 201 The Early and Modern World..... 3
HON 202 The Contemporary World..... 3
HRS 101 An Integrated Survey of Western Civilization I..... 3
HRS 102 An Integrated Survey of Western Civilization II 3
HRS 201 An Integrated Survey of Western Civilization III 3
HRS 202 An Integrated Survey of Western Civilization IV 3
HUM 120 Introduction to the Humanities..... 3
HUM 121 Peace Studies..... 3
HUM 135 Introduction to Native American Literature..... 3
HUM 140 Introduction to Latino Literature.....3
HUM 150 Introduction to African Literature 3
HUM 160 Introduction to Holocaust Literature and Film.....3
HUM 202 Survey of Appalachian Studies I..... 3
HUM 203 Survey of Appalachian Studies II..... 3
HUM 204 Appalachian Seminar..... 3

HUM 220 Historical Perspectives on Peace and War 3
HUM 230 Contemporary Japanese Literature and Culture in Translation 3
HUM 250 Appalachian Literature Survey 3
HUM 251 Contemporary Appalachian Literature 3
HUM 281 Introduction to Film 3
MU 101 Folk and Traditional Music of the Western Continents 3
MUS 100 Introduction to Music 3
MUS 104 Introduction to Jazz History 3
MUS 206 American Music 3
MUS 207 African American Music History 3
MUS 208 World Music 3
MUS 222 History and Sociology of Rock Music 3
PHI 100 Introduction to Philosophy: Knowledge and Reality 3
PHI 110 Medical Ethics 3
PHI 120 Introductory Logic 3
PHI 130 Ethics 3
PHI 140 The Ethics of War and Peace 3
PHI 150 Business Ethics 3
PHI 160 Philosophy Through Pop Culture 3
PHI 170 Philosophy of Religion 3
PHI 180 Animal and Environmental Ethics 3
PHI 200 Professional Responsibility 3
PHI 260 History of Philosophy I: From Greek Beginnings to the Middle Ages 3
PHI 270 History of Philosophy II: From the Renaissance to the Present Era 3
REL 101 Introduction to Religious Studies 3
REL 120 Introduction to the Old Testament 3
REL 121 Introduction to the New Testament 3
REL 130 Introduction to Comparative Religion 3
REL 150 Comparative Ethics of Major World Religions 3
REL 170 Philosophy of Religion 3
THA 101 Introduction to Theatre: Principles and Practices 3
THA 200 Introduction to Dramatic Literature 3
THA 283 American Theatre 3
WGS 201 Introduction to Women's and Gender Studies in the Arts and Humanities 3

1. A student may not receive credit for both ANT 130 and REL 130.

2. May be used to fulfill either Social and Behavioral Sciences or Arts & Humanities competency, but may not be used to fulfill both general education categories.

Other General Education Courses

Foreign Languages

AAS, AA, AS, AFA

FRE101 Elementary French I 4
FRE 102 Elementary French II 4
FRE 201 Intermediate French I 3
FRE 202 Intermediate French II 3
GER 101 Elementary German I 4
GER 102 Elementary German II 4
GER 201 Intermediate German I 3
GER 202 Intermediate German II 3
JPN 101 Beginning Japanese I 4
JPN 102 Beginning Japanese II 4
RAE 150 Elementary Chinese I 4
RAE 151 Elementary Chinese II 4
SED 101 Sign Language I 3
SED 102 Sign Language II 3
SED 203 Sign Language III 3
SED 204 Sign Language IV 3
SPA 101 Elementary Spanish I (spoken approach) 4
SPA 102 Elementary Spanish II (spoken approach) 4
SPA 201 Intermediate Spanish I 3
SPA 202 Intermediate Spanish II 3

Other Degree and/or Credential Requirements

Cultural Studies Courses

Cultural Studies is defined as a course in which the major thrust is the study of one or more non-traditional and/or underrepresented cultures that are traditionally excluded from or marginalized in mainstream American curriculum. Cultural studies courses demonstrate a cultural emphasis in their course descriptions. For completion of the AA/AS degree, students must complete at least one cultural studies course.

Social and Behavioral Sciences

ANT 130/REL130 Introduction to Comparative Religion*
ANT 160 Cultural Diversity in the Modern World
ANT 220 Introduction to Cultural Anthropology
ANT 221 Native People of North America
ANT 235 Food and Culture
ANT 241 Origins of Old World Civilizations
ANT 242 Origins of New World Civilizations
COM 254 Introduction to Intercultural Communication
ECO 150 Introduction to Global Economics
GEO 152 Regional Geography of the World
GEO 160 Lands and Peoples of the Non-Western World
HUM 135 Introduction to Native American Literature*
HUM 202 Survey of Appalachian Studies I*
HUM 203 Survey of Appalachian Studies II*
HUM 204 Appalachian Seminar*
POL 212 Culture and Politics in the Third World
POL 235 World Politics
PSY 230 Psychosocial Aspects of Death and Dying
RAE 120 Introduction to Chinese Culture
REL 101 Introduction to Religious Studies
SOC 235 Inequality in Society
SPA 115 Hispanic Culture: (Country or Region)
WGS 200 Introduction to Women's and Gender Studies in the Social Sciences

Heritage

HIS 101 World Civilization I
HIS 102 World Civilization II
HIS 206 History of Colonial Latin America
HIS 207 History of Modern Latin America, 1810 to Present
HIS 220 Native American History: Pre-Contact to 1865
HIS 221 Native American History: 1865 to Present
HIS 247 History of Islam and Middle Eastern Peoples, 500-1250
HIS 248 History of Islam and Middle Eastern Peoples, 1250 to the Present
HIS 254 History of Sub-Saharan Africa
HIS 260 African American History to 1865
HIS 261 African American History 1865 - Present
HIS 265 History of Women in America
HIS 295 East Asia to 1800
HIS 296 History of Asia II

Humanities

ART 104 Introduction to African Art
ART 108 Introduction to World Art
ART 205 African American Art
ENG 135 Greek and Roman Mythology in Translation
ENG 233 Literature and Identity
ENG 234 Introduction to Women's Literature
ENG 264 Major Black Writers
ENG 282/HUM 282 International Film Studies
HUM 121 Peace Studies
HUM 135 Introduction to Native American Literature*
HUM 140 Introduction to Latino Literature
HUM 150 Introduction to African Literature
HUM 160 Introduction to Holocaust Literature and Film
HUM 202 Survey of Appalachian Studies I*
HUM 203 Survey of Appalachian Studies II*
HUM 204 Appalachian Seminar*
HUM 230 Contemporary Japanese Literature and Culture in Translation
HUM 250 Appalachian Literature Survey
HUM 251 Contemporary Appalachian Literature
MU 101 Folk and Traditional Music of the Western Continents
MUS 104 Introduction to Jazz History
MUS 207 African American Music History
MUS 208 World Music
REL101 Introduction to Religion

REL 130 Introduction to Comparative Religion*
REL 150 Comparative Ethics of Major World Religions
WGS 201Introduction to Women's and Gender Studies in the Arts and Humanities

Foreign Languages

FRE 101 Elementary French I
FRE102 Elementary French II
FRE 201 Intermediate French I
FRE 202 Intermediate French II
GER 101 Elementary German I
GER 102 Elementary German II
GER 201 Intermediate German I
GER 202 Intermediate German II
JPN 101 Beginning Japanese I
JPN 102 Beginning Japanese II
RAE 150 Elementary Chinese I
RAE 151 Elementary Chinese II
SED 101 Sign Language I
SED 102 Sign Language II
SED 203 Sign Language III
SED 204 Sign Language IV
SPA 101 Elem Spanish I
SPA 102 Elementary Spanish II
SPA 201 Intermediate Spanish I
SPA 202 Intermediate Spanish II

* listed under more than one category and/or with a different prefix; may not be counted in more than one general education category.

Digital Literacy

CAD 103 CAD Fundamentals..... 4
CIT 105 Introduction to Computing..... 3
DLC 100 Digital Literacy..... 3
DPT 100 Introduction to 3D Printing Technology..... 3
EDU 204 Technology in the Classroom..... 3
IMD 100 Digital Information & Communication Technologies..... 3
OST 105 Introduction to Information Systems 3
VCC 150 Mac Basics..... 3

Digital literacy, also referred to previously as computer literacy, is a topic both broad in its scope and deep in its detail. As a consequence of this, KCTCS has adopted current Internet and Computing Core Certification (IC3) objectives to define digital literacy, emphasizing in particular the three identified, broad categories of Computing Fundamentals, Key Applications, and Living On-line. A complete listing of the IC3 objectives may be found at http://www.certiport.com/Portal/desktopdefault.aspx?page=common/pagelibrary/IC3_Certifications.html

All AA, AS, AFA, AAS, and diploma students graduating from KCTCS must demonstrate digital literacy by one of the following means within five years preceding their current admission to a KCTCS college:

1. Scoring a minimum of a 75% composite score on the digital literacy exam, or
2. Achieving the IC3 Certification, or
3. Articulating credit from another institution which has demonstrated compliance with the above course criteria as identified by the registrar of the receiving college in cooperation with the digital literacy faculty of the receiving college, or
4. Receiving credit for an approved KCTCS digital literacy course, or
5. Providing documentation of successful completion of other certification exams as approved by KCTCS.

Documentation of digital literacy will be placed on the student's transcript. Students may choose to take the standardized Computer Exam to demonstrate computer competency. Students who score a passing score on the exam will have met the requirements of digital literacy and documentation will be placed on the student's transcript.

Course Transitions

A significant number of courses have changed prefixes and/or course numbers. This does not change the ability of the courses to fulfill general education course requirements as long as courses were eligible at the time of enrollment. Course changes for General Education courses are available in Appendices -E (through 2012-2013 academic year). Course changes for General Education courses that occurred in the 2013-2014 academic year are available in Appendix F.

Employment and Earnings Information

Information related to KCTCS graduates employment and earnings can be found in Postsecondary Feedback Reports at https://kcews.ky.gov/Reports/PSFeedBack/PSFeedbackReports.aspx.

Admission to Programs

Academic requirements are specified for each program and are based on the level of difficulty and the technical nature of the curriculum. Admission to some programs is limited by college resources, facilities, accreditation requirements, etc. Contact the Student Services office or program coordinator at the college for more information.

KCTCS College Codes

ACTC	Ashland Community and Technical College
BLC	Bluegrass Community and Technical College
BSC	Big Sandy Community and Technical College
ECTC	Elizabethtown Community and Technical College
GTW	Gateway Community and Technical College
HZC	Hazard Community and Technical College
HEC	Henderson Community College
HPC	Hopkinsville Community College
JFC	Jefferson Community and Technical College
MDC	Madisonville Community College
MYC	Maysville Community and Technical College
OWC	Owensboro Community and Technical College
SMC	Somerset Community College
SKY	Southcentral Kentucky Community and Technical College
SEC	Southeast Kentucky Community and Technical College
WKCTC	West Kentucky Community and Technical College

KCTCS Online

Kentucky Community and Technical College System's (KCTCS) sixteen colleges deliver quality online courses and programs through two ways to learn: Learn by Term and Learn on Demand http://www.kctcs.edu/KCTCS_Online.aspx.

KCTCS Online: Learn by Term is an alternative for many students who cannot attend classes on campus due to scheduling conflicts, childcare, work or other commitments. Learn by Term courses are offered as traditional semester long courses through all 16 of the Kentucky Community and Technical Colleges.

KCTCS Online: Learn on Demand is a revolution in online education, KCTCS Online: Learn on Demand offers students 100% online degrees, courses, and certificates as either full 12-16 week courses or flexible module-based courses.

Additional information about KCTCS Online courses and programs for both Learn on Demand and Learn by Term, including student information, may be viewed at the main KCTCS Online web page http://www.kctcs.edu/KCTCS_Online.aspx.

Online Programs

KCTCS Online Learn by Term – Semester-based Online Programs

KCTCS colleges offer KCTCS Online Learn by Term traditional, semester-based online programs including the Associate in Arts (AA), Associate in Science (AS), and Associate in Applied Science (AAS) degrees, as well as diplomas and certificates. Students must designate a KCTCS college as their Home College. The KCTCS Home College must have program approval to award the credential. Online classes are delivered by different KCTCS colleges, and the Home College accepts all system-wide online courses delivered by other KCTCS colleges. Online courses offered system-wide and posted at KYVC may be applied toward the required 25 percent of the approved curriculum credits to be completed at the college granting the degree. The student's Home College will provide student services including, but not limited to, admission, advising, registration, library services, billing, and financial aid. Enrolled students will receive automatic e-mails providing user id and password information through the student KCTCS e-mail account.

All of the courses required for online programs can be taken fully online; however, some courses may require exams that are proctored and approved by the instructor. Instructors communicate with students through the Blackboard Learning Management System (LMS) or through KCTCS e-mail.

Students may register for KCTCS Online Learn by Term online classes offered system-wide directly at any KCTCS college. Individuals may also complete a "course inquiry" submit form through www.kyvc.org. KYVC course inquiries are submitted directly to the KCTCS Home College identified by the student. The student's chosen Home College processes the course inquiry either through formal admission procedures or class enrollment.

Students may register for KCTCS Online Learn on Demand by using the online application and registration process described in detail on the website http://learnondemand.kctcs.edu/.

Additional information about KCTCS Online courses and programs for both Learn on Demand and Learn by Term, including student information, may be viewed at the main KCTCS Online web page http://www.kctcs.edu/KCTCS_Online.aspx.

KCTCS Online Learn by Term Current List of Semester-based Online Programs:

Associate in Arts

Associate in Science

Associate in Applied Science:

Administrative Office Technology
- Administrative Track
- Financial Assistant Track
- Desktop Publishing Track

Business Administration Systems
- Accounting Track
- Business Management Track
- Equine Business Management Track
- Finance Track
- Hospitality Management Track
- Human Resource Management Track
- Informatics Track
- Management Track
- Marketing & Retailing Track
- Office Systems Track
- Real Estate Management Track
- Telecommunication Systems Management Track
- Turf Grass/Landscaping Management Track

Computer & Information Technologies
- Applications Track
- Computer Science Track
- Information Security Track
- Internet Technologies Track
- Network Administration Track
- Networking Technologies Track
- Programming Track

Criminal Justice
- Corrections Track
- Criminal Justice Track
- Law Enforcement Track
- Security and Loss Prevention Track

Energy Management
- Energy Management Track

General Occupational/Technical Studies
- General Occupational/Technical Studies Track

Healthcare Facilities Leadership
- Healthcare Facilities Leadership Track

Health Information Technology
- (Practicum arranged on-site in student vicinity)-Health Information Technology Track
- Health Information Technology Track

Human Services
- Human Services Track

Information Management and Design
- Library Information Technology Track

Logistics & Operation Management
- Logistics & Operations Management Track

Marine Technology
- Marine Culinary Track
- Marine Engineering Track
- Marine Logistics Operations Track
- Wheelhouse Management Track

Medical Information Technology (Internship and practicum arranged on-site in student vicinity)
- Medical Administrative Track
- Medical Coding Track
- Electronic Medical Records Track
- Medical Transcription Track
- Medical Office Management Track

Mining Technology
- Engineering Operations Track
- Supervisor Track

Paralegal Technology
- Paralegal Technology Track

Quality Management Systems
- Quality Management Systems Track

Diplomas

Administrative Office Technology
- Administrative Assistant
- Office Assistant
- Financial Assistant
- Desktop Publishing Specialist

Business Administration Systems
- Accounting
- Informatics
- Office Systems
- Organizational Leadership
- Small Business Management

Computer Aided Drafting & Design
- Computer Aided Drafting & Design

Energy Management
- Energy Management

Medical Information Technology (Internship and practicum arranged on-site in student's vicinity)
- Medical Administrative Assistant
- Medical Records Specialist

Visual Communication
- Digital Production Artist

Certificates

Administrative Office Technology
- Administrative
- Basic Business Presentation
- Data Entry Operator
- Desktop Publishing
- Financial Assistant Clerk
- Financial Assistant Trainee
- Financial Record Keeper
- Legal Receptionist
- Receptionist

Business Administration Systems
- Accounting
- Accounting Recordkeeping Specialist
- Advanced Business Administration
- Basic Business Administration
- Business Transfer
- Entrepreneurship
- Equine Business Management
- Finance
- Financial Perspectives
- General Business
- Hospitality Management
- Human Resource Management
- Industrial Supervisor
- Informatics Fundamentals
- Informatics Business Analyst
- Leadership
- Management
- Office Systems
- Operations Management
- Payroll Accounting Specialist
- Pre-Licensing Real Estate
- Quality Management
- Real Estate Pre-Brokerage Management
- Residential Real Estate
- Sales
- Small Business Management
- Supervisory Management
- Team Leadership
- Telecommunication Systems Management
- Turf Grass/Landscaping Management

Computer Aided Drafting and Design
- Computer Assisted Drafter
- Detailer
- Drafter Assistant

Computer and Information Technologies
- A+
- CISCO Networking Associate
- CISCO Networking Enhanced
- CIT Fundamentals
- Computer Support Technician
- Computer Technician Basic
- Computer Technician
- Information Security Specialist
- Microsoft Enterprise Administrator
- Microsoft Network Administrator
- Network Technologies Specialist
- Net+
- Programming
- Productivity Software Specialist

- Security+
- Social Media Specialist
- Web Programming
- Web Administration

Criminal Justice
- Computer Forensic
- Criminal Justice Core
- Corrections
- Law Enforcement
- Advanced Law Enforcement
- Security and Loss Prevention

Digital Game and Simulation Design
- Digital Game and Simulation Design

Energy Management
- Commercial Energy Analysis
- Fundamentals of Energy Production
- Sustainable Energy

Health Information Technology
(Practicums are arranged onsite in student vicinity)
- Medical Records Coding Specialist
- Release of Information Data Specialist

Historic Information Management
- Archival Management
- Museum Management
- Records Management

Human Services
- Direct Support Work

Interdisciplinary Early Childhood Education (Practicums are arranged onsite in student vicinity)
- Early Childhood Administrator
- Child Care Assistant
- Kentucky Child Care Provider
- School Age Child Care

Logistics & Operations Management
- Logistics Management

Marine Technology
- Marine Culinary
- Marine Industry
- Marine Technology Business
- Marine Technical Engineering

Medical Information Technology (Practicums are arranged onsite in student vicinity)
- Electronic Health Records Specialist
- Hospital Admissions Clerk
- Medical Coding
- Medical Receptionist
- Medical Transcriptionist

Mining Technology
Mining Technician I

Nursing (Practicums are arranged onsite in student vicinity)
- Medicaid Nurse Aide
- Advanced Nursing Assistant

Paralegal Technology
- Paralegal Technology

Quality Management Systems
- Quality Leader
- Quality Monitor
- Quality Specialist I
- Quality Support

Visual Communication (Practicums are arranged onsite in student vicinity)
- Animation
- Digital Imaging Assistant
- Digital Photography
- Digital Production Assistant
- Web Design

KCTCS Online Learn on Demand Programs

KCTCS Online Learn on Demand is higher education on your terms. It offers accredited, affordable college programs designed to fit the busy, working adult's schedule. KCTCS Online Learn on Demand offers full courses with multiple start dates available throughout each semester. Courses with Learn on Demand may vary in length based on the start date that you select. Students can work with the Learn on Demand coaching network for specific details as information may vary. Students may register for KCTCS Online Learn on Demand by using the online application and registration process described in detail on the website http://learnondemand.kctcs.edu.

Degree

Associate in Arts

Associate in Science

Business Administration
- Human Resources Management Track
- Management Track

Computer and Information Technologies
- Applications: Computer Support Track
- Information Security Track
- Network Administration Track: Microsoft Windows Administration Sequence
- Network Administration Track: CISCO Networking Associate Sequence
- Programming Track: Information Systems Sequence
- Programming Track: Software Development Sequence

Logistics and Operations Management
- Logistics and Operations Management Track

Marine Technology
- Marine Culinary Management Track
- Marine Engineering Track
- Marine Logistics Operations Track
- Wheelhouse Management Track

Medical Information Technology (Internship and practicum arranged on-site in student vicinity)
- Electronic Medical Records Track
- Medical Administrative Track
- Medical Coding Track
- Medical Office Management Track

Diploma

Business Administration Systems
- Organizational Leadership
- Small Business Management

Medical Information Technology
- Medical Administrative Assistant
- Medical Records Specialist

Certificate

Business Administration
- Advanced Business Administration
- Basic Business Administration
- Entrepreneurship
- Financial Perspectives
- General Business
- Human Resource Management
- Leadership
- Management
- Payroll Accounting Specialist
- Sales
- Small Business Management
- Team Leadership

Computer and Information Technologies
- A+
- CISCO Networking Associate
- CISCO Networking Enhanced
- CIT Fundamentals
- Computer Support Technician
- Computer Tech Basic
- Computer Technician
- Information Security Specialist
- Microsoft Enterprise Administrator
- Microsoft Network Administrator
- Net+
- Programming
- Security+
- Web Programming

Logistics and Operations Management
- Logistics Management

Marine Technology
- Marine Culinary
- Marine Engineering
- Marine Industry
- Marine Technology Business

Medical Information Technology
- Electronic Health Records Specialist
- Hospital Admissions Specialist
- Medical Coding
- Medical Receptionist
- Medical Transcriptionist
- Medical Unit Coordinator

Nursing
- Medicaid Nurse Aide (NAA/MNA)

Learn on Demand College Readiness Program

College Readiness courses help students build reading, writing, and math skills for success in college level classes. Enrollment in these courses is based on a student's College Readiness placement test results so students will only be enrolled in modules that they need.

Mathematics
- ENC 90 - Foundations of College Writing I
- ENC 91 - Foundations of College Writing II

Writing
- MAT 055 - Pre-Algebra
- MAT 065 - Basic Algebra
- MAT 085 - Intermediate Algebra

Reading
- RDG 020 - Improved College Reading
- RDG 030 - Reading for the College Classroom
- RDG 185 - College Reading

Academic Curricula

Associate in Applied Science (A.A.S.) Curricula

Gainful Employment Information

Some programs are considered by the U.S. Department of Education to be "Gainful Employment" programs. Important information about program length, cost, loan debt, graduates, and related occupations can be found on each colleges' web page listed under Academics>Gainful Employment Disclosures or for the link for each college see Appendix F of this catalog. Information is valid as of this document's publication date.

Advanced Integrated Manufacturing

The Manufacturing Process Operations certificate introduces the basic principles and practices of manufacturing processes and procedures in today's contemporary environment. Areas of study include plastic processing, material removal, quality control, and material selection. These skills are geared toward workers in front-line manufacturing positions that need skill upgrading or are first time workers in these environments. Upon completion of the certificate, students are ready to enter as front-line manufacturing employees in processing plastics.

Certificate

Manufacturing Process Operations – 4805013019

(Offered at MDC)

AIM	100	Principles of Advanced Integrated Manufacturing	3
AIM	110	Manufacturing Processes and Materials	3
AIM	120	Introduction to Modern Plastics Manufacturing	3
AIT	1001	Basic Electrical Knowledge	2
AIT	1003	Hydraulic/Pneumatics Fundamentals	1
AIT	200	Process Management and Quality Control	4
		Total Credits	**16**

Advanced Integrated Technology

The Advanced Integrated Technology (AIT) program is a program of study that employs the principle of technology integration within sought after certifications: Multi-skilled Technician, Power Plant Operator, Engineering Controls, Mechatronic Operator and Industrial Refrigeration certifications. Within each certification area, a systems approach is employed that is in line with the expectations of current day employers. The AIT program offers both online coursework and flexible lab hours.

The AIT graduate will have acquired a high level of mechanical and electrical skill sets that can provide them with opportunities to work in today's technically advanced industrial settings (both in manufacturing and value-added 2nd tier support roles). These skill sets include robotics and PLC programming, drive configuration, advanced electric motor control, hydraulics/pneumatics, refrigeration and mechanical drive systems used in modern industry. The curriculum addresses mechanical and electrical theory and its application in today's industrial environment. Critical thinking objectives are also incorporated that will expose the student to problem solving strategies and techniques for troubleshooting the latest generation of high tech equipment.

The Power Plant Technician certification is designed for entry level positions in the Power Plant Industry as a multi-skilled technician. These industries include, but are not limited to, positions in fossil fuel, hydro, nuclear, and alternative energy power plants. Also included are any industries where steam and electricity is generated. Imbedded within the curriculum is an Edison Electrical Institute Exam prep course to help graduates better prepare for the power plant entrance exam.

Students enrolled in the Advanced Integrated Technology Programs are required to achieve a minimum grade of "C" in technical courses.

Associate in Applied Science

Advanced Integrated Technology - 1504997019

(Offered at MDC)

Required General Education:

MAT	126	Technical Algebra and Trigonometry OR	3
MAT	150	College Algebra OR	(3)
		Higher MAT course	(3)
PHY	151	Introductory Physics I AND	3
PHY	161	Introductory Physics I Lab OR	1
PHY	171	Applied Physics	(4)
ENG	101	Writing I OR	3
ENG	105	Writing: An Accelerated Course	(3)
		Social/Behavioral Science course	3
		Heritage/Humanities course (HIS 107 suggested)	3
		Subtotal	**16**

Technical Core:

AIT	100	Power Generation & Utilization	4
AIT	110	Power Distribution Systems	3
AIT	120	Equipment Installation	3
AIT	130	Measurement and Instrumentation	4
AIT	140	Industrial Controls I	4
AIT	150	Industrial Controls II	4
AIT	210	Equipment Maintenance	4
AIT	270	Introduction to Robotics and Programmable Logic Controllers 2	
		Subtotal	**28**

Choose 16 hours (not duplicated from the core) from the following Technical Courses. Students may select other courses as approved by the Advanced Integrated Technology Program Coordinator.

PLW	100	Introduction to Engineering Design	4
PLW	125	Principles of Engineering	4
ACR	100	Refrigeration Fundamentals	3
ACR	101	Refrigeration Fundamentals Lab	2
ACR	102	HVAC Electricity	3
ACR	103	HVAC Electricity Lab	2
ACR	130	Electrical Components	3
ACR	131	Electrical Components Lab	2
IMT	100	Welding for Maintenance	3
IMT	101	Welding for Maintenance Lab	2
CMM	112	Fundamentals of Machine Tools-B	4
AIT	135	Industrial Refrigeration I	3
AIT	160	Workplace Safety	1
AIT	200	Process Management and Quality Control	4
AIT	220	The Integrated Power Grid	3
AIT	230	Integrated Power Plant Operations	3
AIT	235	Industrial Refrigeration II	3
ELT	250	Programmable Logic Controllers	4
AET	250	PLC Networking	4
AET	270	Advanced PLC Programming	4

AIT	290	Selected Topics in Advanced Integrated Technology	.0.1-5.0
AIT	299	Advanced Electromechanical Concepts	4
AET	190	Industrial Computer Programming Concepts	4
		Approved Technical Courses	16
		Total	**60**

Demonstration of digital literacy is required for the AAS degree.

Certificate

Multi-Skilled Technician – 1504993110

(Offered at MDC, SMC)

ACR	100	Refrigeration Fundamentals	3
ACR	101	Refrigeration Fundamentals Lab	2
IMT	100	Welding for Maintenance	3
IMT	101	Welding for Maintenance Lab	2
CMM	112	Fundamentals of Machine Tool-B	4
AIT	200	Process Management and Quality Control	4
AIT	270	Introduction to Robotics and Programmable Logic Controllers	2
		Total	**20**

Engineering Controls – 1504993120

(Offered at MDC)

AIT	140	Industrial Controls I	4
AIT	150	Industrial Controls II	4
AET	190	Industrial Computer Programming Concepts	4
ELT	250	Programmable Logic Controllers	4
AET	250	PLC Networking	4
AET	270	Advanced PLC Programming	4
AIT	270	Introduction to Robotics and Programmable Logic Controllers	2
		Total	**26**

Power Plant Operator - 1504993130

(Offered at MDC)

ENM	101	Energy Industry Fundamentals	9
AIT	220	The Integrated Power Grid	3
AIT	230	Power Plant Capstone	3
		Total	**15**

Mechatronics Operator - 1504993089

(Offered at MDC)

AIT	100	Power Generation and Utilization	4
AIT	110	Power Distribution Systems	3
AIT	1203	Mechanical Installation	1
		Total	**8**

Industrial Refrigeration – 1504993140

(Offered at MDC, MYC, SMC)

ACR	100	Refrigeration Fundamentals	3
ACR	101	Refrigeration Fundamentals Lab	2
ACR	102	HVAC Electricity	3
ACR	103	HVAC Electricity Lab	2
ACR	130	Electrical Components	3
ACR	131	Electrical Components Lab	2
AIT	135	Industrial Refrigeration I	3
AIT	235	Industrial Refrigeration II	3
		Total	**21**

Multi-Skilled Maintenance Apprenticeship – 1504993150

(Offered at MDC)

AIT	1001	Basic Electrical Knowledge	2
AIT	1003	Hydraulic/Pneumatic Fundamentals	1
AIT	1101	Electrical Power Distribution	1
AIT	1102	Fluid Power Distribution	2
AIT	1201	Electrical Installation	1
AIT	1202	Piping, Pneumatic, and Installation	1
AIT	1203	Mechanical Installation	1
AIT	1301	Principles of Instrumentation	2
AIT	1302	Integrated Process Control	2
AIT	1401	Basic Electrical Controls	2
AIT	1402	Basic Pneumatic Controls	1
AIT	1403	Basic Hydraulic Controls	1
AIT	1501	Intermediate Electrical Controls	2
AIT	1502	Intermediate Pneumatic Controls	1
AIT	1503	Intermediate Hydraulic Controls	1
AIT	160	Workplace Safety	1
AIT	2101	Predictive/Preventive Maintenance and Lubrication	1
IMT	100	Welding for Maintenance	3
IMT	101	Welding for Maintenance Lab	2
		Total	**28**

Ammonia Refrigeration Fundamentals – 1504993160

(Offered at MDC. MYC)

AIT	135	Industrial Refrigeration I	3
AIT	235	Industrial Refrigeration II	3
		Total	**6**

Advanced Manufacturing

The Fundamentals of Advanced Manufacturing certificates provide students with the foundational skills for a career in advanced manufacturing as well as for continued progress in any of the six advanced manufacturing programs offered at Gateway. After completion of these short-term certificates, students may apply for work while continuing their pathway toward more stackable credentials including other certificates, diplomas, and degrees.

Certificate

Fundamentals of Advanced Manufacturing & Mechatronics - 1506133089

(Offered at GTW)

MFG	102	Certified Production Technician	4-6
CIT	105	Introduction to Computers	3
ELT	110	Circuits I	5
MFG	125	Fundamentals of Mechatronics A	3
MFG	130	Fundamentals of Mechatronics B	3
		Total Credits	**18-20**

Fundamentals of Advanced Manufacturing & Machining - 1506133099

(Offered at GTW)

MFG	102	Certified Production Technician	4-6
CIT	105	Introduction to Computers	3
CMM	110	Fundamentals of Machine Tools A	3
CMM	112	Fundamentals of Machine Tools B	4
CMM	118	Metrology Control Charts	2
		Total Credits	**16-18**

Fundamentals of Advanced Manufacturing & Quality Control- 1506133110

(Offered at GTW)

MFG	102	Certified Production Technician	4-6
CIT	105	Introduction to Computers	3
BRX	110	Basic Blueprint Reading for Machinist	2
BRX	210	Mechanical Blueprint Reading	2
CMM	118	Metrology Control Charts	2
QMS	101	Introduction to Quality Systems	3
		Total Credits	**16-18**

African American Studies

The African American Studies Certificate Program provides an interdisciplinary approach to identify and engage the historical and contemporary issues confronting Africans and African Americans. Core courses include African American history, literature, and music. Additional courses in communication, humanities, and social sciences complete the program.

Certificate

African American Studies - 0501013029

(Offered at ELC, JFC)

ENG	101	Writing I	3
HIS	260	African American History I	3
HIS	261	African American History II	3
MUS	207	African American Music History	3
ENG	264	Major Black Writers	3
		Elective*	3
		Total Credits	**18**

***African American Studies Certificate Elective:**
(Required: 3 credits)

COM	299	African American Communication	3
ANT	160	Cultural Diversity in the Modern World	3
FLK	280	Cultural Diversity in the United States	3
SOC	235	Inequality in Society	3
MUS	104	Introduction to Jazz	3
HUM	150	Introduction to African Literature	3
REL	101	Introduction to Religious Studies	3
REL	130	Introduction to Comparative Religion	3
ART	104	Introduction to African Art	3
TA	299	Special Topics in Theatre	3

Agricultural Studies

The Agricultural Studies program provides students with the skills, knowledge, and experience necessary to enter the field of agriculture and enhance current skill sets. This program includes a Food and Farm Management Track, as well as a Production Agriculture Operations track.

The Food and Farm Management track emphasizes diversified agriculture and is designed for the new and beginning farmer. Upon graduation, the Food and Farm Management student will be trained in crop and livestock management, as well as business management, sales, and value added production. Cumulatively, these skills will empower the graduate to begin a diversified farming operation.

The Production Agriculture Operations track provides training and knowledge in large scale, commercial production agriculture businesses. Students will gain skills in crop management, agriculture technology, pest management, and crop scouting. This skill set will enable graduates to obtain positions with large farm operations or other businesses related to the agriculture industry.

Associate in Applied Science

Agricultural Studies – 0103017029

(Offered at HPC, OWC)

General Education:

ENG	101	Writing I	3
MAT	110	Applied Mathematics OR	3
MAT	126	Technical Algebra and Trigonometry OR	(3)
MAT	150	College Algebra	(3)
BIO	112	Introduction to Biology OR	3
BIO	150	Principles of Biology I	(3)
		Heritage/Humanities	3
AGR	101	Economics of Food and Agriculture	3
		Subtotal	**15**

Technical Core:

		Digital Literacy	0-3
AGR	125	Introduction to Fertilizers and Soils	3
AGR	150	Agricultural Power	3
AGR	180	Agricultural Internship I	2
AGR	190	Agricultural Internship II	2
AGR	240	Introduction to Animal Science	3
AGR	250	Introduction to Plants/Crop Production	3
AGR	280	Livestock Management	3
AGS	115	Agriculture Maintenance	3
AGS	205	Forage Management OR	3
AGR	140	Issues in Agriculture	(3)
AGS	215	Weed Management	3
AGS	265	Agriculture Business and Records	2
AGS	295	Capstone	1
		Subtotal	**31-34**

Food and Farm Management Track – 010301703

(Offered at OWC)

AGR	260	Introduction to Sustainable Agriculture	3
AGS	135	Herbaceous Plant Production	3
AGS	155	Greenhouse Production	3
AGS	175	Agriculture Marketing and Sales	2
AGS	225	Fruit and Vegetable Production	3
AGS	275	Value Added Production	3
COE	199	Cooperative Education OR	2
COED	198	Practicum	(2)
		Track Subtotal	**19**
		Total Credit Hours	**65-68**

Production Agriculture Operations Track – 010301704

(Offered at OWC)

AGR	130	Field Applications in Agriculture	2
AGR	200	Agricultural Internship III	2
AGS	145	Technology in Agriculture	3
AGS	235	Field Crop Production	3
AGS	245	Pest Management	3
AGS	255	Crop Scouting	3
AGS	285	Farm Financial Management	3
		Track Subtotal	**19**
		Total Credit Hours	**65-68**

Diploma

General Agricultural Studies -0103014029

(Offered at OWC)

ENG	101	Writing I	3
MAT	110	Applied Mathematics OR	3
MAT	126	Technical Algebra and Trigonometry OR	(3)
MAT	150	College Algebra	(3)
BIO	112	Introduction to Biology OR	3
BIO	150	Principles of Biology I	(3)
AGR	101	The Economics of Food and Agriculture	3
		Digital Literacy	0-3
AGR	125	Introduction to Fertilizers and Soils	3
AGR	150	Agricultural Power	3
AGR	180	Agricultural Internship I	2
AGR	240	Introduction to Animal Science	3
AGR	250	Introduction to Plants/Crop Production	3
AGS	115	Agriculture Maintenance	3
AGS	135	Herbaceous Plant Production	3
AGS	215	Weed Management	3
AGS	235	Field Crop Production	3
AGS	265	Agriculture Business and Records	2
		Total Credit Hours	**40-43**

Agricultural Technology

The Agricultural Technology program prepares students for occupations in a wide variety of jobs in agriculture (both production and value-added) with a range of skills and knowledge.

The curriculum addresses concepts in theory, skills and techniques that are required by the agriculture industry. It will use hands-on strategies, which require an integrated practicum across a variety of settings. Graduates will seek job opportunities in the agriculture industry on commercial farms and businesses related to the agriculture industry.

Associate in Applied Science

Agriculture Technology - 0103017019

(Offered at HEC, HPC)

General Education:

ENG	101	Writing I	3
ENG	102	Writing II	3
COM	252	Introduction to Interpersonal Communication	3
MAT	105	Mathematics for Business OR	3
MAT	110	Applied Mathematics OR	(3)
MAT	150	College Algebra	(3)
AGR	101	The Economics of Food and Agriculture	3
		Heritage/Humanities	3
BIO	112	Introduction to Biology AND	3
BIO	113	Introduction to Biology Lab OR	1
BIO	114	Biology I* AND	(3)
BIO	115	Biology I Lab* OR	(1)
BIO	116	Biology II* AND	(3)
BIO	117	Biology II Lab* OR	(1)
BIO	143	Zoology with Laboratory* OR	(4)
BIO	141	Botany with Laboratory* OR	(4)
BIO	150	Principles of Biology I* AND	(3)
BIO	151	Principles of Biology Lab I*	(2)
CHE	130	Introductory General and Biological Chemistry OR	4
CHE	140	Introductory General Chemistry AND	(3)
CHE	145	Introductory General Chemistry Lab I OR	(1)
CHE	170	General College Chemistry I AND	(3)
CHE	175	General College Chemistry Lab I	(1)
		Subtotal	**26-27**

Technical Core:

AGR	125	Introduction to Fertilizers and Soils	3
AGR	140	Issues in Agriculture	3
AGR	180	Agricultural Internship I	2
AGR	230	Career Development in Agriculture	3
AGR	240	Introduction to Animal Science OR	3
ASC	106	Agriculture Animal Science	(3)
AGR	250	Introduction to Plants/Crop Production	3
		Digital Literacy	3
		Electives	5
		Subtotal	**25**

Agricultural Technology Track – 010301701

(Offered at HEC, HPC)

AGR	130	Field Applications in Agriculture	2
AGR	150	Agriculture Power	3
AGR	170	Introduction to Equipment, Machines, and Engines	3
AGR	190	Agricultural Internship II	2
AGR	200	Agricultural Internship III	2
AGR	220	Computers in the Agricultural Environment	3
		Subtotal	**15**
		Total Credits Agricultural Technology Track	**66-67**

Sustainable Agriculture Track – 010301702

(Offered at HEC)

AGR	160	Horticulture Science	3
AGR	260	Introduction to Sustainable Agriculture	3
AGR	270	Introduction to Organic Agriculture	3
BAS	160	Introduction to Business	3
BAS	282	Principles of Marketing	3
		Subtotal	**15**
		Total Credits Sustainable Agriculture Track	**66-67**

Diploma

Agricultural Technology -0103014019

(Offered at HEC, HPC)

		General Education Courses:	
		Written Communication, Oral Communications, or Humanities/Heritage	3
AGR	101	The Economics of Food and Agriculture	3
		Subtotal	**6**

Technical Courses:

AGR	125	Introduction to Fertilizers and Soils	3
AGR	130	Field Applications in Agriculture	2
AGR	140	Issues in Agriculture	3
AGR	150	Agricultural Power	3
AGR	170	Introduction to Equipment, Machines, and Engines	3
AGR	180	Agricultural Internship I	2
AGR	190	Agricultural Internship II	2
AGR	200	Agricultural Internship III	2
AGR	220	Computers in the Agricultural Environment	3
AGR	230	Career Development in Agriculture	3
AGR	240	Animal Science	3
AGR	250	Introduction to Plants/Crop Production	3
		Digital Literacy	3
		Subtotal	**35**
		Total Credits	**41**

Certificates

Agricultural Technician - 0103013009

(Offered at HEC, HPC, HZC)

AGR	140	Issues in Agriculture	3
AGR	150	Agricultural Power	3
		Digital Literacy	3
AGR	230	Career Development in Agriculture	3
AGR	180	Agricultural Internship I	2
AGR	125	Introduction to Fertilizers and Soils	3
AGR	190	Agricultural Internship II	2
AGR	170	Introduction to Equipment, Machines, and Engines	3
AGR	130	Field Applications in Agriculture	2
		Total Credits	**24**

Sustainable Agriculture – 0103013029

(Offered at HEC, HZC)

AGR	140	Issues in Agriculture	3
AGR	260	Introduction to Sustainable Agriculture	3
BAS	160	Introduction to Business	3
AGR	250	Introduction to Plants and Crop Production	3
AGR	240	Animal Science	3
AGR	125	Introduction to Fertilizers and Soils	3
AGR	160	Horticulture Science	3
AGR	270	Introduction to Organic Agriculture	3
BAS	282	Principles of Marketing	3
		Total Credits	**27**

Air Conditioning Technology

Installing and servicing heating, air conditioning and refrigeration equipment is the focus of this program. Academic courses, theory courses, and laboratory experiences are designed to promote success in the air conditioning field.

The Boiler Maintenance Certificate is designed to complement our Associate in Applied Science (AAS) and Diploma for students enrolled in Air Conditioning Technology Program. Installing, initial start-up and servicing commercial boilers used in HVAC applications is the focus of this certificate. Theory courses and laboratory experiences are designed to promote success in boiler service and facility management.

The Chiller Certificate is designed to complement our Associate in Applied Science and Diploma for students enrolled in Air Conditioning Technology Program. Installing and servicing Chillers used in commercial and industrial applications is the focus of this certificate. Theory courses and laboratory experiences are designed to promote success in the service and maintenance of Chillers.

Students enrolled in the Air Conditioning Technology program must achieve a minimum grade of "C" in each technical course.

Associate in Applied Science

Air Conditioning Technology - 4702017019

(Offered at BLC, BSC, ELC, SKY)

General Education:

Quantitative Reasoning	3 credit hours
Natural Sciences	3 credit hours
Social/Behavioral Sciences	3 credit hours
Heritage/Humanities	3 credit hours
Written Communication	3 credit hours
Oral Communications	3 credit hours
Subtotal Credits	**18**

Technical Courses:

		Digital Literacy	0-3
ACR	100	Refrigeration Fundamentals	3
ACR	101	Refrigeration Fundamentals Lab	2
ACR	102	HVAC Electricity AND	3
ACR	103	HVAC Electricity Lab OR	2
		Comparable Electrical Course*	(4-5)
ACR	130	Electrical Components	3
ACR	131	Electrical Components Lab	2
ACR	170	Heat Load/Duct Design	3
ACR	250	Cooling and Dehumidification	3
ACR	251	Cooling and Dehumidification Lab	2
ACR	260	Heating and Humidification	3
ACR	262	Heating and Humidification Lab	2
ACR	270	Heat Pump Application	3
ACR	271	Heat Pump Application Lab	2
		Electives**	10-12
		Subtotal Credits	**42-48**
		Total Credits	**60-66**

Digital literacy must be demonstrated either by competency exam or by completing a computer/digital literacy course.

Diploma

Heating, Ventilation, and Air Conditioning Mechanic - 4702014009

(Offered at ASC, BLC, BSC, ELC, GTW, HZC, JFC, MYC, OWC, SEC, SKY, SMC, WKC)

General Education:

Area 1 =		Written Communication, Oral Communications, OR Humanities/Heritage	3
Area 2 =		Social/Behavioral Sciences, Natural Sciences OR Quantitative Reasoning	3
		Subtotal Credits	**6**
		Digital Literacy course OR demonstrated competency	0-3
ACR	100	Refrigeration Fundamentals	3
ACR	101	Refrigeration Fundamentals Lab	2
ACR	102	HVAC Electricity AND	3
ACR	103	HVAC Electricity Lab OR	2
		Comparable Electrical Course*	(4-5)
ACR	130	Electrical Components	3
ACR	131	Electrical Components Lab	2
ACR	170	Heat Load/Duct Design OR	3
ACR	209	Manual N Commercial Load Calculations & Design	(4)
ACR	250	Cooling and Dehumidification	3
ACR	251	Cooling and Dehumidification Lab	2
ACR	260	Heating and Humidification	3
ACR	262	Heating and Humidification Lab	2
ACR	270	Heat Pump Application AND	3
ACR	271	Heat Pump Application Lab OR	2
ACR	207	Commercial HVAC Systems	(5)
ACR	291	Special Problems OR	1
ACR	298	Practicum	2
		Electives**	8-11
		Subtotal Credits	**41-50**
		Total Credits	**47-56**

***Comparable Electrical Courses:**

EET	154	Electrical Construction I AND	(2)
EET	155	Electrical Construction I Lab OR	(2)
EET	112	Basic Electrical Theory: AND	(3)
EET	113	Basic Electrical Theory Lab OR	(1)
ELT	110	Circuits I OR	(5)
IMT	110	Industrial Maintenance Electrical Principles AND	(3)
IMT	111	Industrial Maintenance Electrical Principles Lab	(2)
		OR Consent of the instructor	

Certificates

Environmental Control System Servicer - 4702013039

(Offered at ASC, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MYC, OWC, SEC, SKY, SMC,WKC)

ACR	100	Refrigeration Fundamentals	3
ACR	101	Refrigeration Fundamentals Lab	2
ACR	102	HVAC Electricity AND	3
ACR	103	HVAC Electricity Lab OR	2
		Comparable Electrical Course*	(4-5)
ACR	130	Electrical Components	3
ACR	131	Electrical Components Lab	2
ACR	250	Cooling and Dehumidification	3
ACR	251	Cooling and Dehumidification Lab	2
ACR	260	Heating and Humidification	3
ACR	261	Heating and Humidification Lab	3
		Total Credits	**24-25**

Environmental System Repair Helper - 4702013069

(Offered at ASC, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MYC, OWC, SEC, SKY, SMC,WKC)

ACR	100	Refrigeration Fundamentals	3
ACR	101	Refrigeration Fundamentals Lab	2
ACR	102	HVAC Electricity AND	3
ACR	103	HVAC Electricity Lab OR	2
ACR	130	Electrical Components AND	(3)
ACR	131	Electrical Components Lab OR	(2)
		Comparable Electrical Course*	(4-5)
		Total Credits	**9-10**

Domestic Air Conditioner and Furnace Installer- 4702013029

(Offered at ASC, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MYC, OWC, SEC, SKY, SMC,WKC)

ACR	100	Refrigeration Fundamentals	3
ACR	101	Refrigeration Fundamentals Lab	2
ACR	102	HVAC Electricity AND	3
ACR	103	HVAC Electricity Lab OR	2
		Comparable Electrical Course*	(4-5)
ACR	130	Electrical Components	3
ACR	131	Electrical Components Lab	2
ACR	170	Heat Load/Duct Design	3
ACR	250	Cooling and Dehumidification	3
ACR	251	Cooling and Dehumidification Lab	2
ACR	260	Heating and Humidification	3
ACR	262	Heating and Humidification Lab	2
ACR	270	Heat Pump Application	3
ACR	271	Heat Pump Application Lab	2
ACR	290	Journeyman Preparation	3
		Total Credits	**35-36**

Refrigeration Mechanic - 4702013059

(Offered at ASC, BLC, BSC, ELC, HPC, HZC, JFC, MYC, OWC, SEC, SMC,WKC)

ACR	100	Refrigeration Fundamentals	3
ACR	101	Refrigeration Fundamentals Lab	2
ACR	102	HVAC Electricity AND	3
ACR	103	HVAC Electricity Lab OR	2
		Comparable Electrical Course*	(4-5)
ACR	130	Electrical Components	3
ACR	131	Electrical Components Lab	2
ACR	200	Commercial Refrigeration	3
ACR	201	Commercial Refrigeration Lab	2
ACR	210	Ice Machines	3
ACR	250	Cooling and Dehumidification	3
ACR	251	Cooling and Dehumidification Lab	2
		Total Credits	**27-28**

Boiler Maintenance – 4702013079

(Offered at MYC, SEC, SMC,WKC)

ACR	100	Refrigeration Fundamentals	3
ACR	101	Refrigeration Fundamentals Lab	2
ACR	102	HVAC Electricity AND	3
ACR	103	HVAC Electricity Lab OR	2
ACR	206	Boilers	5
ACR	207	Commercial HVAC Systems	5
		Total Credits	**20**

Chiller Maintenance – 4702013089

(Offered at MYC, SEC, SMC,WKC)

ACR	100	Refrigeration Fundamentals	3
ACR	101	Refrigeration Fundamentals Lab	2
ACR	102	HVAC Electricity AND	3
ACR	103	HVAC Electricity Lab OR	2
ACR	208	Chillers	5
ACR	209	Manual N Load Calculation & Design	4
		Total Credits	**19**

Air Conditioning Technical Electives**:

This list is not all-inclusive. Other courses may be taken with approval of the program instructor/advisor.

ACR	112	Sheet Metal Fabrication	3
ACR	113	Sheet Metal Fabrication Lab	2
ACR	290	Journeyman Preparation	3
ACR	291	Special Problems I	1
ACR	293	Special Problems II	2
ACR	295	Special Problems III	3
ACR	298	Practicum	2
ACR	299	Cooperative Education Program	2
BAS	160	Introduction to Business	3
FPX	100	Fluid Power	3
FPX	101	Fluid Power Lab	2
ETT	110	Voice and Data Installer Level 1	4
ETT	114	Voice and Data Installer Level II	4
ETT	116	Fiber Optics Systems	3
ETT	118	Residential Network Wiring	3
ETT	120	Project Management	3
ETT	122	Voice and Data Installer Technician	3
ETT	123	Voice and Data Installer Technician Lab	2
EET	102	Advanced Mathematics for Electronics	2
EET	116	Web Page Design	3
EET	148	Electronic Drafting	3
EET	150	Transformers	2
EET	151	Transformers Lab	1
EET	198	Practicum	2
EET	199	Cooperative Education Program	2
EET	214	Television and Radio Systems	6
EET	215	Television and Radio Systems Lab	4
EET	216	Computer Electronics Fundamentals	3
EET	217	Computer Electronics Fundamentals Lab	2
EET	218	Computer Applications I	3
EET	219	Computer Applications I Lab	2
EET	242	Robotics	3
EET	243	Robotics Lab	2
EET	244	Advanced Electronic Application	6
EET	250	National Electric Code	4
EET	252	Electrical Construction II	2
EET	254	Electrical Construction	3
EET	255	Electrical Construction Lab	4
EET	260	Home Automated Technology	2
EET	264	Rotating Machinery	2
EET	265	Rotating Machinery Lab	2
EET	266	Rotating Machinery and Transformers	3
EET	267	Rotating Machinery and Transformers Lab	3
EET	268	Rotating Machinery Electrical Motor Controls I	3
EET	269	Rotating Machinery and Motor Controls I Lab	4
EET	270	Electrical Motor Controls I	2
EET	271	Electrical Motor Controls I Lab	2
EET	272	Electrical Motor Controls II	2
EET	273	Electrical Motor Controls II Lab	2
EET	274	Electrical Motor Controls	3
EET	275	Electrical Motor Controls Lab	4
EET	276	Programmable Logic Controllers	2
EET	277	Programmable Logic Controllers Lab	2
EET	278	Electrical Motor Controls II and PLCs	3
EET	279	Electrical Motor Controls II and PLCs Lab	4
EET	281	Special Problems I	1
EET	283	Special Problems II	2
EET	285	Special Problems III	3
EET	286	Programmable Logic Controllers II	2
EET	287	Programmable Logic Controllers II Lab	2
EET	298	Practicum	1-8
EET	299	Cooperative Education Program	1-8
ELT	114	Circuits II	5
BRX	110	Basic Blueprint Reading for Machinist	2
BRX	112	Blueprint Reading for Machinist	4
BRX	120	Basic Blueprint Reading	3
BRX	210	Mechanical Blueprint Reading for Machinist	2

BRX	220	Blueprint Reading for Construction	3
BRX	230	Mechanical Blueprint Reading	3
BEX	100	Basic Electricity for Non-Majors	3
BEX	101	Basic Electricity Lab for Non-Majors	2
FEX	100	Fundamentals of Electricity for Non-Majors	3
ELT	102	Blueprint Reading	2
ELT	106	Mechanical Engineering Graphics	2
ELT	107	Computer Applications for Technicians	4
ET	113	Laser Optics Components	3
ELT	118	Computer Numerical Control	3
ET	119	Introduction to Computer –Aided Manufacturing	3
ELT	122	Mechanical Power Transmission Systems	3
MNG	123	Mining Electricity I	4
ELT	124	Mechanical Power Transmission Systems Lab	1
ELT	201	Statics and Strength of Materials	4
ELT	210	Devices I	3
ELT	232	Computer Software Maintenance	3
ELT	234	Computer Hardware Maintenance	3
ELT	243	Electric Power Distribution	3
ELT	244	Electrical Machinery and Controls	4
ELT	250	Programmable Logic Controllers	4
ET	252	Electric Power Systems	3
ELT	256	Microprocessor Fundamentals	4
ET	260	Fluid Flow and Heat Transfer	5
ELT	261	Instrumentation and Measurements	3
ELT	262	Measurement and Instrumentation	4
ELT	264	Mechanical Design	4
ELT	265	Applied Fluid Power	3
MNG	286	Roof Control and Ventilation	3
ELT	290	Selected Topics in Engineering Technology: (Topic)	1-4
ELT	295	Independent Problems	1-2
ME	205	Introduction to Computer Graphics	3
ME	220	Engineering Thermodynamics I	3
WLD	152	Basic Welding B	5
WLD	100	Oxy-Fuel Systems	2
WLD	101	Oxy-Fuel Systems Lab	2
WLD	110	Cutting Processes	2
WLD	111	Cutting Processes Lab	2
WLD	120	Shielded Metal Arc Welding	2
WLD	121	Shielded Metal Arc Welding Fillet Lab	2
PLB	100	Basic Theory of Plumbing	3
PLB	105	Plumbing Principles	3
PLB	150	Plumbing, Introduction to the Trade	3
PLB	151	Basic Plumbing Skills	3

Appalachian Studies

The Appalachian Studies certificate will provide students a wide variety of academic directions to follow. The key components for each track, Humanities 202, 203, and 204, will form the core for the Appalachian Studies certificate and will provide a basic overview of all aspects of Appalachian studies. Given this core, students can then select a more focused aspect of Appalachian culture to study.

Certificate

Appalachian Studies - 0501223069

(Offered at ASC, SEC)

Core:

HUM	202	Survey of Appalachian Studies I	3
HUM	203	Survey of Appalachian Studies II	3
HUM	204	Appalachian Seminar	3
		Subtotal	**9**

Communication Track - 050122301

(Offered at ASC, SEC)

COM	254	Introduction to Intercultural Communication OR	3
		Elective approved by Appalachian Studies Committee or its designee	(3)
		Total	**12**

Creative Writing Track - 050122302

(Offered at ASC, SEC)

ENG	207	Beginning Workshop in Imaginative Writing OR	3
		Elective approved by Appalachian Studies Committee or its designee	(3)
		Total	**12**

Music Track - 050122303

(Offered at ASC, SEC)

MU	101	Folk and Traditional Music of the Western Continents	3
		Total	**12**

Science Track - 050122304

(Offered at ASC, SEC)

BIO	120	Human Ecology OR	3
		Elective approved by Appalachian Studies Committee or its designee	(3)
GLY	101	Physical Geology	3
GLY	111	Laboratory for Physical Geology	1
		Total	**16**

Social Science Track - 050122305

(Offered at ASC, SEC)

SWK	275	The Family OR	3
		Elective approved by Appalachian Studies Committee or its designee	(3)
ANT	220	Intro to Cultural Anthropology	3
		Total	**15**

Applied Process Technologies

Prepares the graduate for entry-level operations in the power plant, lineman, chemical, petro-chemical, refining, and general industries. Teaches students about automated and semi-automated systems used in various industries. Prepares students in the safe start-up, operation and shutdown of various system components and units. Offers a choice of AAS degree with chemical/refinery operator, power plant operator, and lineman technology, as well as certificate tracks.

Students selecting the certificate options must test at the MAT126 ready level. Progression in the program is contingent upon achievement of a grade of "C" or higher in the Math, Physics, Chemistry and technical courses and maintenance of a 2.0 cumulative grade point average or better on a 4.0 scale.

Associate in Applied Science

Applied Process Technologies - 4103017029

(Offered at ASC, JFC)

General Education Courses

MAT	126	Technical Algebra & Trigonometry (Recommended) OR	3
MAT	116	Technical Mathematics	(3)
CHE	130	Introductory General & Biological Chemistry OR	4
CHE	140/145	Introduction to General Chemistry with Lab	(4)
ENG	101	Writing I	3
		Social/Behavioral Sciences OR	3
ECO	101	Contemporary Economic Issues (Recommended)	(3)

		Heritage/Humanities	3
COM	252	Introduction to Interpersonal Communication	3
		Subtotal	**19**

Technical Core Courses

		Digital Literacy Course	3
PHS	175	Applied Physics (Recommended) OR	6
PHY	171	Applied Physics	(4)
SFA	101	OSHA, Health, and Environmental Safety	3
APT	102	Process Fundamentals	4
APT	104	Rotating & Reciprocating Equipment	3
APT	106	Process Chemistry	2
APT	108	Stationary Equipment	2
APT	202	Federally Mandated Training	3
APT	204	Safety Skills Training	1
APT	251	Application of Process Operations OR	2
APT	291	Special Problems in APT	(2-3)
EES	101	Basic Electronics	2
		Subtotal	**29-32**

Chemical/Refinery Operator Track - 410301701

(Offered at ASC, JFC)

APT	142	Instrumentation	4
APT	144	Process Operations	4
APT	146	Process Applications	2
APT	148	Process Operations Safety	2
		Subtotal	**12**
		Total	**60-63**

Power Plant Operator Track - 410301702

(Offered at ASC, JFC)

APT	142	Instrumentation	4
APT	154	Power Plant Practice	6
APT	156	Power Plant Protection	2
		Subtotal	**12**
		Total	**60-63**

Lineman Technology Track - 410301703

(Offered at ASC, JFC)

APT	158	Lineman Technology I	3
APT	159	Lineman Technology I Lab	4
EET	150	Transformers	2
EET	151	Transformer Lab	1
APT	258	Lineman Technology II	3
APT	259	Lineman Technology II Lab	4
		Subtotal	**17**
		Total	**65-68**

Electives

APT	299	Cooperative Education Program	(1-6)
COE	199	Co-op	(1-8)
QMS	101	Introduction to Quality Systems	(3)
EX	196	Experiential Education	(1-6)

Certificate

Chemical/Refinery Operator - 4103013039

SFA	101	OSHA, Health and Environmental Safety	3
COM	252	Introduction to Interpersonal Communication	3
CHE	130	Introductory General & Biological Chemistry OR	4
CHE	140/145	Introduction to General Chemistry with Lab	(4)
APT	102	Process Fundamentals	4
APT	104	Rotating & Reciprocating Equipment	3
APT	108	Stationary Equipment	2
APT	142	Instrumentation	4
APT	144	Process Operations	4
APT	146	Process Applications	2
EES	101	Basic Electronics	2
		Total	**31**

Industrial Worker - 1507013019

(Offered at ASC, JFC, MYC)

SFA	101	OSHA, Health, and Environmental Safety	3
		Total	**3**

Lineman – 4103013049

(Offered at ASC, MYC)

APT	158	Lineman Technology I	3
APT	159	Lineman Technology I Lab	4
EET	150	Transformers	2
EET	151	Transformers Lab	1
APT	258	Lineman Technology II	3
APT	259	Lineman Technology II Lab	4
EES	101	Basic Electronics	2
TRU	100	Truck Driving	6
		Total	**25**

Power Plant Operator - 4103013029

SFA	101	OSHA, Health and Environmental Safety	3
COM	252	Introduction to Interpersonal Communication	3
CHE	130	Introductory General & Biological Chemistry OR	4
CHE	140/145	Introduction to General Chemistry with Lab	(4)
APT	102	Process Fundamentals	4
APT	104	Rotating & Reciprocating Equipment	3
APT	108	Stationary Equipment	2
APT	142	Instrumentation	4
APT	154	Power Plant Practice	6
APT	156	Power Plant Protection	2
EES	101	Basic Electronics	2
		Total	**33**

Apprenticeship Studies

This program is designed to complement specialized study in a national or state approved apprentice curriculum (i.e. 2000 hours per year on the job in a supervised work environment and 144 hours per year of related classroom instruction). Prerequisite: Completion of national/state certified apprenticeship program.

Associate in Applied Science

Apprenticeship Studies - 4799997010

(Offered at ELC, GTW, JFC,WKC)

Required:

		Quantitative Reasoning	3
		Heritage/Humanities	3
		Social/Behavioral Sciences	3
ENG	101	Writing I	3
		Oral Communications	3
PHY	171	Applied Physics OR	4
		Other Natural Sciences course with consent of program coordinator	(3)
		Subtotal	**18-19**

Technical Core:

		Computer/Digital Literacy course OR demonstrated competency	0-3
		Apprenticeship Credit*	42
		Subtotal	**42-45**
		Total Credits	**60-64**

*Apprenticeship credit requirement can be met by a combination of apprenticeship credit (APS 201: 20-40 credit hours) and other technical courses as approved by the program coordinator.

Architectural Technology

The Architectural Technology program provides instruction in the concepts and skills required for careers in architectural and related professions involved in designing for the built environment. At the core of the curriculum are a series of architectural studios where students prepare construction documents. The series begins with a study of residential construction and culminates with commercial. Emphasis is placed on quality graphic communication, the development of design skills and a thorough understanding of a variety of construction types. Complementing the studio sequence are courses designed to provide instruction in building materials, structures, mechanical/electrical systems, professional practices, and architectural theory and history. Electives in the program allow students to customize their education to fit their interests. Given the wide range of topics covered in the curriculum, graduates are prepared to find employment in architectural and related professional offices including positions in construction estimating, civil engineering, structural engineering, mechanical/electrical engineering, construction management, computer-aided drafting, building code enforcement, specification writing, urban planning, historic preservation, contracting, sub-contracting, and building material sales and marketing.

Associate in Applied Science

Architectural Technology - 1513037019

(Offered at BLC)

ACH	100	Construction Documents I	3
ACH	110	Survey of the Architectural Profession	1
ACH	120	Theory and History of Architecture I	3
ACH	150	Construction Documents II	3
ACH	160	Building Materials and Construction I	3
ACH	161	Building Materials and Construction II	3
ACH	170	Theory and History of Architecture II	3
ACH	175	Introduction to Systems	3
ACH	195	Computer Aided Drafting I	3
ACH	200	Construction Documents III	3
ACH	225	Structures	3
ACH	250	Construction Documents IV	3
ACH	260	Office Practice	3
ACH	275	Mechanical and Electrical Systems	3
		Technical Courses ** (see list below)	10
ENG	101	Writing I	3
MAT	116	Technical Mathematics OR	3
MAT	150	College Algebra OR	(3)
		Other Quantitative Reasoning course approved by program coordinator	(3)
		Heritage/Humanities	3
		Natural Sciences Course	3
		Social/Behavioral Sciences Course	3
		Digital Literacy	0-3
		Total	**65-68**

**** Technical Courses**

ACH	180	Selected Topics in Architectural Technology: (Topic)	1-3
ACH	194	Visual Composition	3
ACH	198	Practicum in Architectural Technology	1-3
ACH	280	Revit/Building Information Modeling	2
ACH	290	Building Codes I	3
ACH	291	Construction Management	3
ACH	292	Building Codes II	3
ACH	293	Presentation Techniques	3
ACH	294	Specification Writing	3
ACH	295	Computer Aided Drafting II	3
ACH	297	Estimating Techniques	3
ACH	298	Computer 3D Modeling	3
COE	199	Cooperative Education: Arch Tech	1-3

Additional Suggested General Education Courses (Not Required)

ENG	102	Writing II	3
		Oral Communication Course	3

Auto Body/Collision Repair Technology

From repairing small dents to rebuilding the bodies of wrecked or damaged vehicles, this program maintains the current commercial standards. Students are taught the types of materials used in filler compounds, the colors and chemical make-up of paints used to refinish, welding and cutting procedures, design and installation of trim, cost estimating and preparation for finish work. All are skills applied in actual jobs performed in shop assignments.

Progression in the Auto Body/Collision Repair Technology program is contingent upon achievement of a grade of "C" or better in each course and maintenance of a 2.0 cumulative grade point average.

Diploma

Collision Repair Technician - 4706034019

(Offered at BSC, GTW, HZC, JFC, MYC, SEC, SKY, SMC,WKC)

General Education Courses:

Area 1 =	Written Communication, Oral Communications, or Humanities/Heritage	3
Area 2 =	Social/Behavioral Sciences, Natural Sciences, or Quantitative Reasoning	3
	Subtotal	**6**

Technical Courses:

		Digital Literacy course OR demonstrated competency	0-3
CRT	100	Introduction to Collision Repair	2
CRT	130	Non-Structural Analysis and Damage Repair	6
CRT	131	Non-Structural Analysis and Damage Repair Lab	6
CRT	150	Painting and Refinishing	6
CRT	151	Painting and Refinishing Lab	6
CRT	230	Structural Analysis and Damage Repair	6
CRT	231	Structural Analysis and Damage Repair Lab	6
CRT	250	Mechanical and Electrical Components	6
CRT	251	Mechanical and Electrical Components Lab	6
CRT	198	Practicum OR	1
CRT	199	Cooperative Education	(1)
		Subtotal	**51-54**
		Total Credits	**57-60**

Recommended Program Electives

CRT	298	Advanced Practicum OR	(2)
CRT	299	Advanced Cooperative Education	(2)

Certificates

Automotive Painter - 4706033119

(Offered at BSC, GTW, HZC, JFC, MYC, SEC, SKY, SMC,WKC)

Technical Courses:

CRT	100	Introduction to Collision Repair	2
CRT	130	Non-Structural Analysis and Damage Repair	6
CRT	131	Non-Structural Analysis and Damage Repair Lab	6
CRT	150	Painting and Refinishing	6
CRT	151	Painting and Refinishing Lab	6
CRT	230	Structural Analysis and Damage Repair	6
CRT	231	Structural Analysis and Damage Repair Lab	6
		Total Credits	**38**

Automotive Painter Helper - 4706033029

(Offered at BSC, GTW, HZC, JFC, MYC, SEC, SKY, SMC,WKC)

Required:

CRT	100	Introduction to Collision Repair	2
CRT	150	Painting and Refinishing	6
CRT	151	Painting and Refinishing Lab	6
		Total Credits	**14**

Collision Repair Helper - 4706033059

(Offered at BSC, GTW, HZC, JFC, MYC, SEC, SKY, SMC,WKC)

Required:

CRT	100	Introduction to Collision Repair	2
		Electives (Collision Repair Courses with the exception of CRT 150 and CRT 151)	12
		Total Credits	**14**

Collision Repairer – 4706033109

(Offered at BSC, GTW, SEC, SKY)

CRT 100	Introduction to Collision Repair	2
CRT 130	Non-Structural Analysis and Damage Repair	6
CRT 131	Non-Structural Analysis and Damage Repair Lab	6
CRT 150	Painting and Refinishing	6
CRT 151	Painting and Refinishing Lab	6
CRT 230	Structural Analysis and Damage Repair	6
CRT 231	Structural Analysis and Damage Repair Lab	6
CRT 250	Mechanical and Electrical Components	6
CRT 251	Mechanical and Electrical Components Lab	6
	Total Credits	**50**

Automotive Technology

Instruction in systems such as engines, fuel, on-board computers, transmissions, steering, suspension, and brakes is the basis for this program.

The Automotive Technician option provides knowledge of the various systems used to develop skills in troubleshooting, performing preventative maintenance, servicing and repairing automobiles. The program, which is designed to be completed in two years, prepares graduates for entry-level service technician jobs in the auto repair industry. The student may be provided a work-study experience alternating between periods of work on-site and work in a classroom-laboratory setting.

The Parts/Service Writer option provides knowledge of the various systems and components and how they relate. This knowledge enables the student to more accurately interpret their customers' automotive complaints, identify and sell automotive parts, and provide efficient customer service within the automotive service and repair industry. The student may take the ASE exams in these areas when they have completed the requirements for these tests.

The Hybrid and Electric Vehicle Technician certificate complements the Associate in Applied Science degree and is designed for students to increase and develop the basic knowledge and skills necessary for diagnosing and repairing hybrid and electric vehicles. The additional credential is designed for students who wish to enhance their knowledge of hybrid and electric vehicles. This credential will make the student more employable in the automotive repair field.

Note: Hours Exception (69-72 for the A.A.S. and 61-64 for the Diploma) approved by the KCTCS Board of Regents in March 2011

Associate in Applied Science

Automotive Technology - 4706047019

(Offered at BLC, BSC, ELC, HZC, JFC, OWC, SKY,WKC)

General Education:

		Quantitative Reasoning	3
		Natural Sciences	3
		Social/Behavioral Sciences	3
		Heritage/ Humanities	3
		Written Communication	3
		General Education Total Credit Hours	**15**

Technical Core:

		Digital Literacy course OR demonstrated competency	0-3
ADX	120	Basic Automotive Electricity	3
ADX	150	Engine Repair	3
ADX	170	Climate Control	3
ADX	260	Electrical Systems	3
AUT	110	Brake Systems	3
AUT	130	Manual Transmissions	3
AUT	140	Basic Fuel and Ignition Systems	3
AUT	142	Emission Systems	3
AUT	160	Suspension and Steering	3
AUT	180	Automatic Transmission/Transaxle	3
AUT	240	Computer Control Systems and Diagnosis	3
		Total Technical core credits	**33-36**

Automotive Technician Track - 470604701

(Offered at BLC, BSC, ELC, HZC, JFC, OWC, SKY,WKC)

ADX	121	Basic Automotive Electricity Lab	2
ADX	151	Engine Repair Lab	2
ADX	171	Climate Control Lab	1
ADX	261	Electrical Systems Lab	2
AUT	111	Brake Systems Lab	2
AUT	131	Manual Transmissions Lab	2
AUT	141	Basic Fuel and Ignition Systems Lab	2
AUT	143	Emission Systems Lab	2
AUT	161	Suspension and Steering Lab	2
AUT	181	Automatic Transmission/Transaxle Lab	2
AUT	241	Computer Control Systems and Diagnosis Lab	2
		Subtotal Credits	**21**
		Total Credits	**69-72**

Automotive Parts/Service Writer Track - 470604702

(Offered at JFC, OWC)

ISX	100	Industrial Safety	3
TQX	110	Total Quality Management	3
B&E	100	Introduction to Business and Economics	1
ACT	101	Fundamentals of Accounting I	3
TEC	100	Communication for Business and Industry OR	3
CMS	152	Writing for Business and Industry	3
		Subtotal Credits	**13**
		Total Credits	**61-64**

Diploma

Automotive Technician - 4706044019

(Offered at ASC, BLC, BSC, ELC, GTW, HZC, JFC, MYC, OWC, SEC, SKY, SMC, WKC)

General Education:

Area 1= Written Communication, Oral Communications, or Humanities/Heritage		3
Area 2= Social/Behavioral Sciences, Natural Sciences or Quantitative Reasoning		3
	General Education Total Credit Hours	**6**

Technical Core:

		Digital Literacy course OR demonstrated competency	0-3
ADX	120	Basic Automotive Electricity	3
ADX	121	Basic Automotive Electricity Lab	2
ADX	150	Engine Repair	3
ADX	151	Engine Repair Lab	2
ADX	170	Climate Control	3
ADX	171	Climate Control Lab	1
ADX	260	Electrical Systems	3
ADX	261	Electrical Systems Lab	2
AUT	110	Brake Systems	3
AUT	111	Brake Systems Lab	2
AUT	130	Manual Transmissions	3
AUT	131	Manual Transmissions Lab	2
AUT	140	Basic Fuel and Ignition Systems	3
AUT	141	Basic Fuel and Ignition Systems Lab	2
AUT	142	Emission Systems	3
AUT	143	Emission Systems Lab	2
AUT	160	Suspension and Steering	3
AUT	161	Suspension and Steering Lab	2
AUT	180	Automatic Transmission/Transaxle	3
AUT	181	Automatic Transmission/Transaxle Lab	2
AUT	240	Computer Control Systems and Diagnosis	3
AUT	241	Computer Control Systems and Diagnosis	2
		Any approved work experience component	1
		Subtotal Credits	**55-58**
		Total Credits	**61-64**

Automotive Parts/Service Writer - 4706044029

(Offered at JFC, OWC)

General Education:

Area 1= Written Communication, Oral Communications, or Humanities/ Heritage			3
Area 2= Social/Behavioral Sciences, Natural Sciences or Quantitative Reasoning			3
		General Education Total Credit Hours	**6**

Technical or Support Courses:

		Digital Literacy course OR demonstrated competency	0-3
ADX	120	Basic Automotive Electricity	3
ADX	150	Engine Repair	3
ADX	170	Climate Control	3
ADX	260	Electrical Systems	3
AUT	110	Brake Systems	3
AUT	130	Manual Transmissions	3
AUT	140	Basic Fuel and Ignition Systems	3
AUT	142	Emission Systems	3
AUT	160	Suspension and Steering	3
AUT	180	Automatic Transmission/Transaxle	3
AUT	240	Computer Control Systems and Diagnosis	3
ISX	100	Industrial Safety	3
TQX	110	Total Quality Management	3
B&E	100	Introduction to Business and Economics	1
TEC	100	Communication for Business and Industry OR	3
CMS	152	Writing for Business and Industry	3
ACT	101	Fundamentals of Accounting I	3
Any approved work experience component			1
		Technical or Support Courses Total Credit Hours	**47-50 credits**
		Total Credits	**53-56 credits**

Certificates

Automotive Air Conditioning Mechanic - 4706043019

(Offered at ASC, BLC, BSC, ELC, GTW, HZC, JFC, MYC, OWC, SEC, SKY, SMC, WKC)

ADX	170	Climate Control	3
ADX	171	Climate Control Lab	1
		Total Credits	**4**

Automotive Electrician - 4706043039

(Offered at ASC, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MYC, OWC, SEC, SKY, SMC,WKC)

ADX	120	Basic Automotive Electricity AND	3
ADX	121	Basic Automotive Electricity Lab	2
ADX	260	Electrical Systems	3
ADX	261	Electrical Systems Lab	2
		Total Credits	**10**

Manual Transmission/Drive Train Technician - 4706043059

(Offered at ASC, BLC, BSC, ELC, GTW, HZC, JFC, MYC, OWC, SEC, SKY, SMC, WKC)

AUT	130	Manual Transmissions	3
AUT	131	Manual Transmissions Lab	2
		Total Credits	**5**

Automatic Transmission/Transaxle Technician - 4706043079

(Offered at ASC, BLC, BSC, ELC, GTW, HZC, JFC, MYC, OWC, SEC, SKY, SMC, WKC)

AUT	180	Automatic Transmission/Transaxle	3
AUT	181	Automatic Transmission/Transaxle Lab	2
		Total Credits	**5**

Brake Repairer- 4706043069

(Offered at ASC, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MYC, OWC, SEC, SKY, SMC,WKC)

AUT	110	Brake Systems	3
AUT	111	Brake Systems Lab	2
		Total Credits	**5**

Engine Repairer - 4706043089

(Offered at ASC, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MYC, OWC, SEC, SKY, SMC,WKC)

ADX	150	Engine Repair	3
ADX	151	Engine Repairer	2
		Total Credits	**5**

Front End Mechanic - 4706043099

(Offered at ASC, BLC, BSC, ELC, GTW, HZC, JFC, MYC, OWC, SEC, SKY, SMC, WKC)

AUT	160	Suspension and Steering	3
AUT	161	Suspension and Steering Lab	2
		Total Credits	**5**

Tune-up Mechanic - 4706043109

(Offered at ASC, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MYC, OWC, SEC, SKY, SMC,WKC)

ADX	120	Basic Automotive Electricity	3
ADX	121	Basic Automotive Electricity Lab	2
ADX	260	Electrical Systems	3
ADX	261	Electrical Systems Lab	2
AUT	140	Basic Fuel and Ignition Systems	3
AUT	141	Basic Fuel and Ignition Systems Lab	2
AUT	142	Emissions Systems	3

AUT	143	Emissions Systems Lab	2
AUT	240	Computer Control Systems and Diagnosis	3
AUT	241	Computer Control Systems and Diagnosis Lab	2
		Total Credits	**25**

Hybrid and Electric Vehicle Technician – 4706043139

AUT	140	Basic Fuel and Ignition Systems	3
AUT	141	Basic Fuel and Ignition Systems Lab	2
AUT	142	Emissions Systems	3
AUT	143	Emissions Systems Lab	2
ADX	150	Engine Repair	3
ADX	151	Engine Repairer	2
ADX	120	Basic Automotive Electricity	3
ADX	121	Basic Automotive Electricity Lab	2
ADX	260	Electrical Systems	3
ADX	261	Electrical Systems Lab	2
ADX	275	Hybrid and Electric Vehicle Technology	3
ADX	276	Hybrid and Electric Vehicle Technology Lab	2
		Total Credits	**25**

Aviation Maintenance Technology

Expertise in the inspection, repair, service and overhaul of aircraft and engines is the goal of this program certified by the Federal Aviation Agency (FAA). Interpreting specifications from service and technical manuals, using testing procedures and equipment, diagnosing problems and making necessary repairs are the skills taught in aircraft maintenance. To work in the aircraft industry, the FAA must certify students completing this program.

Students enrolled in the Aviation Maintenance Technology program must achieve a minimum grade of "C" in each FAA accredited course.

Note: Hours Exception (75-76 for the A.A.S. and 66-67 for the diploma) approved by the KCTCS Board of Regents in June 2011.

Associate in Applied Science

Aviation Maintenance Technology – 4706087029

(Offered at JFC, SMC)

General Education:

ENG	101	Writing I	3
		Quantitative Reasoning	3
		Natural Sciences	3
		Heritage/Humanities	3
		Social/Behavioral Sciences	3
		Subtotal	**15**

ATE	100	Aviation Math	1
ATE	102	Introduction to Aviation Maintenance Technology I	3
ATE	104	Introduction to Aviation Maintenance Technology II	3
ATE	106	Introduction to Aviation Maintenance Technology III	3
ATE	108	Introduction to Aviation Maintenance Technology IV	3
ATE	202	Aircraft Structures I	3
ATE	204	Aircraft Structures II	3
ATE	206	Aircraft Structures III	3
ATE	208	Aircraft Structures IV	3
ATE	222	Aircraft Systems I	3
ATE	224	Aircraft Systems II	3
ATE	226	Aircraft Systems III	3
ATE	228	Aircraft Systems IV	3
ATE	242	Aircraft Powerplants I	3
ATE	244	Aircraft Powerplants II	3
ATE	246	Aircraft Powerplants III	3
ATE	248	Aircraft Powerplants IV	3
ATE	252	Aircraft Powerplant Systems I	3
ATE	254	Aircraft Powerplant Systems II	3
ATE	256	Aircraft Powerplant Systems III	3
ATE	258	Aircraft Powerplant Systems IV	3
		Total Credits	**76**

NOTE: Computer/digital literacy must be demonstrated either by competency exam or by completing a computer/digital literacy course.

Diploma

Airframe and Power Plant Maintenance Technician - 4706084049

(Offered at JFC, SMC)

General Education: 6 credit hour requirement for diploma

Area 1 =	Written Communication, Oral Communications, or Humanities/Heritage	3
Area 2 =	Social/Behavioral Sciences, Natural Sciences, or Quantitative Reasoning	3
	Subtotal	**6**

ATE	100	Aviation Math	1
ATE	102	Introduction to Aviation Maintenance Technology I	3
ATE	104	Introduction to Aviation Maintenance Technology II	3
ATE	106	Introduction to Aviation Maintenance Technology III	3
ATE	108	Introduction to Aviation Maintenance Technology IV	3
ATE	202	Aircraft Structures I	3
ATE	204	Aircraft Structures II	3
ATE	206	Aircraft Structures III	3
ATE	208	Aircraft Structures IV	3
ATE	222	Aircraft Systems I	3
ATE	224	Aircraft Systems II	3
ATE	226	Aircraft Systems III	3
ATE	228	Aircraft Systems IV	3
ATE	242	Aircraft Powerplants I	3
ATE	244	Aircraft Powerplants II	3
ATE	246	Aircraft Powerplants III	3
ATE	248	Aircraft Powerplants IV	3
ATE	252	Aircraft Powerplant Systems I	3
ATE	254	Aircraft Powerplant Systems II	3
ATE	256	Aircraft Powerplant Systems III	3
ATE	258	Aircraft Powerplant Systems IV	3
		Total Credits	**67**

NOTE: Computer/Digital literacy must be demonstrated either by competency exam or by completing a computer/digital literacy course.

Certificates

Airframe Maintenance Technician - 4706083069

(Offered at JFC, SMC)

ATE	100	Aviation Math	1
ATE	102	Introduction to Aviation Maintenance Technology I	3
ATE	104	Introduction to Aviation Maintenance Technology II	3
ATE	106	Introduction to Aviation Maintenance Technology III	3
ATE	108	Introduction to Aviation Maintenance Technology IV	3
ATE	202	Aircraft Structures I	3
ATE	204	Aircraft Structures II	3
ATE	206	Aircraft Structures III	3
ATE	208	Aircraft Structures IV	3
ATE	222	Aircraft Systems I	3
ATE	224	Aircraft Systems II	3
ATE	226	Aircraft Systems III	3
ATE	228	Aircraft Systems IV	3
		Total Credits	**37**

Introduction to Aviation Electronics – 4706083099

(Offered at JFC, SMC)

ATE	292	Aviation Electronics	3
ATE	293	GROL+Radar Exam Prep	3
		Total Credits	**6**

Power Plant Maintenance Technician - 4706083079

(Offered at JFC, SMC)

ATE	100	Aviation Math	1
ATE	102	Introduction to Aviation Maintenance Technology I	3
ATE	104	Introduction to Aviation Maintenance Technology II	3
ATE	106	Introduction to Aviation Maintenance Technology III	3
ATE	108	Introduction to Aviation Maintenance Technology IV	3
ATE	242	Aircraft Powerplants I	3
ATE	244	Aircraft Powerplants II	3
ATE	246	Aircraft Powerplants III	3
ATE	248	Aircraft Powerplants IV	3
ATE	252	Aircraft Powerplant Systems I	3
ATE	254	Aircraft Powerplant Systems II	3
ATE	256	Aircraft Powerplant Systems III	3
ATE	258	Aircraft Powerplant Systems IV	3
		Total Credits	**37**

Biomedical Technology Systems

The Biomedical Technology Systems (BTS) program prepares the adult learner to repair, maintain, and manage a wide variety of medical devices, equipment, and systems employed in various healthcare sectors. The learner will gain a holistic perspective of the life-cycle duties and skills needed to assure that medical devices meet safety and performance expectations. The program addresses both general and specialized medical technologies along with how these technologies are interfaced with health IT networks. Upon completion of the program, the graduate will be prepared for immediate employment as an entry-level biomedical equipment technician professional and may pursue employment with a number of employers including, but not limited to: hospitals, clinics, home health equipment companies, third-party medical equipment service providers, and medical equipment manufacturers.

Associate in Applied Science

Biomedical Technology Systems– 1504017029

(Offered at MDC)

General Education Courses

ENG	101	Writing I	3
MAT	126	Technical Algebra and Trigonometry OR	3
MAT	150	College Algebra	(3)
PHY	171	Applied Physics	4
		Social/Behavioral Sciences	3
		Heritage/Humanities	3
		Subtotal	**16**

Technical Support Courses

AIT	1001	Basic Electrical Knowledge	2
AIT	1101	Electrical Power Distribution	1
BIO	135	Basic Anatomy and Physiology with Laboratory	4
CIT	105	Introduction to Computing (fulfills digital literacy requirement)	3
CIT	111	Computer Hardware and Software	4
CIT	160	Introduction to Networking Concepts	4
CIT	180	Security Fundamentals	3
		Subtotal	**21**

Technical Courses

BTS	100	Biomedical Technology Systems: A Career Perspective	1
BTS	110	Environmental Risks and Precautionary Measures for the BTS Professional	1
BTS	120	Essentials of Biomedical Electronics I	2
BTS	125	Essentials of Biomedical Electronics II	2
BTS	130	Medical Equipment Management I	2
BTS	140	Science Principles Employed in Medical Technologies	1
BTS	200	Patient Care Support and Management Systems	2
BTS	210	Diagnostic Medical Equipment and Non-Radiographic Imaging Modalities	2
BTS	220	Laboratory Devices, Instruments, and Analyzers	2
BTS	230	Medical Equipment Management II	2
BTS	250	Introduction to Medical-Based IT Networks and Standards	2
BTS	260	Radiographic Imaging Modalities	2
BTS	270	Therapeutic Equipment Modalities I	2
BTS	275	Therapeutic Equipment Modalities II	2
BTS	280	General Care Monitoring and Instrumentation	2
BTS	285	Critical Care Monitoring and Instrumentation	2
BTS	290	Clinical Experience in Biomedical Technology Systems Professional	2
		Subtotal	**31**
		Total	**68**

Elective

BTS	299	Selected Topics of Investigation in Biomedical Technology Systems	(0.5-5.0)

Certificate

Foundations in Biomedical Technology Networking Systems - 1504013029

(Offered at MDC)

CIT	105	Introduction to Computing (fulfills digital literacy requirement)	3
CIT	111	Computer Hardware and Software	4
CIT	160	Introduction to Networking Concepts	4
CIT	180	Security Fundamentals	3
BTS	250	Introduction to Medical-Based IT Networks and Standards	2
		Subtotal	**16**

Biotechnology Laboratory Technician

The Biotechnology Laboratory Technician AAS program provides the basic knowledge and laboratory skills needed to prepare for entry-level jobs in university, government, pharmaceutical, or industrial biotechnology laboratories. Graduates of the program will be able to seek employment in biotechnology laboratories such as biomanufacturing, quality control, quality assurance, research and development, and regulatory bioscience. The program has been designed to develop skills in basic analysis of biological molecules (DNA and proteins), use of bioreactors, recombinant DNA technology, generation of cell cultures, immunological method applications, regulatory compliance (GMPs and GLPs), accurate documentation, and laboratory safety skills. Some courses are dual credit and college credit can be earned while students are enrolled in secondary school.

The Biotechnology Laboratory Assistant certificate provides basic training and personal support to prepare students for certificates and degrees in Biotechnology or entry level employment in bioscience laboratories. The program is intended for students with little or no background in science, although the program is open to all students. Students enroll in three integrated courses as a cohort, BTN 100, BTN 103, and BTN 104.

The Basic Biotechnician certificate introduces hands-on laboratory training needed for entry-level employment in a biotechnological laboratory.

The Advanced Biotechnician certificate provides practical laboratory skills to supplement theoretical knowledge gained from previous coursework, to improve employability in the biotechnology industry.

The Bioinformatics certificate introduces interdisciplinary curriculum to gain skills required to seek employment at an entry level in performing data acquisition, management, and analysis in laboratory environments. The certificate program can also benefit working professionals seeking to advance or change their careers. Students will learn basic programming,

concepts of molecular biology, and use of bioinformatics applications and resources. Emphasis will be placed on the skills required to become creative and flexible team members and leaders who can work with others in the dynamic interdisciplinary team environment found in today's biotechnology companies. The Bioinformatics certificate is a joint credential within the Biotechnology Laboratory Technician and Computer Information Technologies areas.

The Environmental Biotechnician certificate provides hands-on training using an interdisciplinary approach of integrating applied biotechnology to study the natural environment. Green technologies, sustainability, biodegradation, and bioremediation will be explored. Students will collect water, air, and soil samples and conduct experiments related to the detection and monitoring of environmental pollutants. The use of biotechnology laboratory methods, system's biology, and bioinformatics will be emphasized. Students who complete the curriculum satisfactorily are qualified for entry level positions in laboratories or field research companies, including federal, state, or local agencies, university or privately owned biotechnology research labs, or nature resource management organizations. The Environmental Biotechnician Certificate requires successful completion of 21 hours of coursework, which may be earned in 2 semesters, provided all the prerequisites have been met for the required coursework. This is a joint certificate in the Biotechnology Laboratory Technician and Environmental Science Technician programs.

Associate in Applied Science

Biotechnology Laboratory Technician – 4101017029

(Offered at BLC)

Required General Education Courses

		Heritage/Humanities	3
		Social/ Behavioral Sciences	3
		Natural Sciences with Laboratory[1]	4 – 5
		Quantitative Reasoning[2]	3
		Written Communication	3
		Subtotal: General Education Requirements	**16-17**

[1] Science requirement may be satisfied by:

-One semester of college biology with lab, or

-One semester of college chemistry with lab, or

-Course approved by the program coordinator.

[2]Assessment score above the KCTCS transitional course placement level or completion of transitional courses (courses numbered 001-099).

Required Technical Core Courses

BTN	101	Introduction to Biotechnology	1
BTN	105	Applied Biotechnology Laboratory Calculations	3
BTN	201	Biotechnology Techniques I	4
BTN	202	Biotechnology Techniques II	4
		Digital Literacy[3]	0-3
		Subtotal: Technical Core Requirements	**12-1**

[3]Digital literacy must be demonstrated either by competency exam or by successfully completing a digital literacy course.

Required Technical Elective Courses

Choose at least 28 credit hours:

BTN	106	Fundamentals of Scientific Communication	3
BTN	110	Nucleic Acids	4
BTN	115	Biomanufacturing	4
BTN	120	Biofuels	4
BTN	125	Bioinformatics I	2
BTN	126	Bioinformatics II	2
BTN	160	Introduction to Agricultural Biotechnology	4
BTN	210	Cell Culture and Function	4
BTN	220	Immunological Methods	4
BTN	225	Protein Bioseparation Methods	4
BTN	295	Independent Investigation in Biotechnology[4] OR	1-3
BTN	298	Biotechnology Learning Laboratory[4] OR	(1-8)
COE	199	Cooperative Education[4]	(1-3)
		Or course approved by the program coordinator	
		Subtotal: Technical Elective Courses	**28**

[4]Students are strongly encouraged to gain hands-on experience by enrolling in BTN 295, BTN 298 or COE 199, to reinforce technical skills learned in the classroom.

Technical Support Courses

Choose at least 4 credit hours within Natural Sciences and Mathematics, usually courses with prefixes ANA, BIO, BTN, CHE, EST, GLY, MA, MAT, PGY, PHY, STA or any course approved by the program coordinator. BTN courses not used to satisfy Technical Electives may be used to satisfy Technical Support.

Subtotal: Technical Support Courses	**4**
Total	**60 - 64**

Certificate

Biotechnology Laboratory Assistant - 4101013040

(Offered at BLC)

BTN	100	Contextual Science with Laboratory[5]	4
BTN	103	Contextual Laboratory Language[5]	3
BTN	104	Contextual Laboratory Calculations[5]	3
BTN	101	Introduction to Biotechnology	1
BTN	106	Fundamentals of Scientific Communications	3
		Digital Literacy Course	3
		Total	**17**

[5]BTN 100, BTN 103, and BTN 104 must be taken as a cohort.

Basic Biotechnician- 4101013020

(Offered at BLC)

BTN	101	Introduction to Biotechnology	1
BTN	105	Applied Biotechnology Laboratory Calculations	3
BTN	201	Biotechnology Techniques I	4
BTN	202	Biotechnology Techniques II	4
		Science[6]	4-5
		Total	**16-17**

[6] Science requirement may be satisfied by:

-Completion of the Biotechnology Laboratory Assistant Certificate, or

-Completion of BTN 100, BTN 103, and BTN 104 or cohort with a "C" or better, or

-One semester of college biology with lab, or

-One semester of college chemistry with lab, or

-Course approved by the program coordinator.

Advanced Biotechnician - 4101013050

(Offered at BLC)

BTN	101	Introduction to Biotechnology	1
BTN	105	Applied Biotechnology Laboratory Calculations	3
BTN	201	Biotechnology Techniques I	4
BTN	202	Biotechnology Techniques II	4

Choose 15 credits from the following:

BTN	106	Fundamentals of Scientific Communication	3
BTN	110	Nucleic Acids	4
BTN	115	Biomanufacturing	4
BTN	120	Biofuels	4
BTN	125	Bioinformatics I	2
BTN	126	Bioinformatics II	2
BTN	160	Introduction to Agricultural Biotechnology	4
BTN	210	Cell Culture and Function	4
BTN	220	Immunological Methods	4
BTN	225	Protein Bioseparation Methods	4
BTN	295	Independent Investigation in Biotechnology[7] OR	1-3
BTN	298	Biotechnology Learning Laboratory [7] OR	(1-8)

COE	199	Cooperative Education[7]	(1-3)
		Or course approved by the program coordinator	(4-5)
		Total	**27**

[7]Students are strongly encouraged to gain hands-on experience by enrolling in BTN 295, BTN 298 or COE 199, to reinforce technical skills learned in the classroom.

Prerequisites:

• At least one semester of college level chemistry and college level biology, with an earned associate's degree or higher.

• Or consent of program coordinator

Bioinformatics– 4101013060

(Offered at BLC)

BTN	101	Introduction to Biotechnology	1
BTN	105	Applied Biotechnology Laboratory Calculations	3
BTN	125	Bioinformatics I	2
BTN	126	Bioinformatics II	2
BTN	201	Biotechnology Techniques I	4
BTN	202	Biotechnology Techniques II	4
CIT	149	Java I OR	3
CS	115	Introduction to Computer Programming OR	(3)
INF	120	Elementary Programming	(3)
CIT	170	Database Design Fundamentals OR	3
INF	282	Introduction to Databases	(3)
CIT	249	Java II OR	3
CS	215	Introduction to Program Design, Abstraction, and Problem Solving OR	(4)
INF	260	Object Oriented Programming I AND	(3)
INF	260L	Object Oriented Programming I Laboratory	(1)
CIT	155	Web Page Development OR	3
IMD	133	Beginning Web Design OR	(3)
INF	286	Introduction to Web Development	(3)
		Total	**28-29**

Environmental Biotechnician – 4101013070

(Offered at BLC)

BTN	101	Introduction to Biotechnology	1
BTN	201	Biotechnology Techniques I	4
BTN	202	Biotechnology Techniques II	4
CHE	170	General College Chemistry I	3
CHE	175	General College Chemistry Laboratory I	1
EST	150	Introductory Ecology	4
EST	170	Environmental Sampling Laboratory	2
EST	260	Environmental Methods and Analysis Lab	2
		Total	**21**

Broadband Technology

The Broadband Technology program provides training through three distinct tracks –Broadband Technician, Broadband Telecommunications Equipment Installer Track, and Broadband Design and Applications Track. The program includes instruction in telecommunications, outside plant operations, computer networking, communications networks and systems, signals, circuits, fiber optics, and wireless systems and technology. Progression in the Broadband Technology program is contingent upon achievement of a grade of "C" or better in each technical course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

Broadband Technician Track

The track provides course work, competencies and experiences to prepare the students for success as Broadband Technicians. Areas of study as related to this track include HFC (Hybrid Fiber Cable), Fiber Optics Systems, Basic Telephony Installations and Maintenance, Outside Plant Pole Climbing and Construction Safety, and Electrical Construction (specifically Fiber Optic and Data Cable Installations).

Broadband Telecommunications Equipment Installer Track

This track provides course work, competencies and experiences to prepare the students for success as Broadband Telecommunications Equipment Installers. Areas of study as related to this track include Computer Hardware and Software, Introduction to GIS (Graphical Information Systems), Functions and Operation of PBX Systems, Fiber Optics Systems Splicing and Maintenance, Basic Telephony Installations and Maintenance, Outside Plant Pole Climbing and Construction Safety.

Broadband Design and Applications Track

The track provides course work, competencies and experiences to prepare the students for success in Broadband Design and Applications. Areas of study as related to this track include GIS (Graphical Information Systems), Security Systems and Regulations, HFC (Hybrid Fiber Cable), Satellite Dishes, Fiber Optics Systems, NEC (National Electrical Code) outlining the standards for proper installation of communication cables and systems according to the NFPA70 (National Fire Protection Association), and Electrical Construction (specifically Fiber Optic and Data Cable Installations).

Broadband Basic Installer

The Broadband Basic Installer certificate provides an overview of concepts needed to complete the duties of a broadband technician relating to telecommunications service and installation. The certificate also provides the foundational basic skills and knowledge required to effectively perform the installation and maintenance job duties and functions. Students are introduced to HFC Cables and fiber optic transmissions and cable repair.

Broadband Support Technician

The Broadband Support Technician certificate provides training on first level support via telephone or field service to minimize interruptions in inside wire for residential/business broadband (DSL/Video) service, Central Office junctions as required for broadband continuity, digital subscriber carriers and associated broadband equipment, Residential Gateways and DSL business class routers, along with the array of wireless home networking equipment. The certificate prepares technicians to follow documented call handling procedures to manage inbound contacts and document relevant information in a Service Management tool, while providing excellent customer service and technical support services.

Broadband Telecommunications Equipment Installer

The Broadband Telecommunications Equipment Installer certificate introduces the set-up, installation, rearrangement, and/or removing switching and dialing equipment used in telecommunications central offices and end user broadband consumers. Training also includes an introduction to routing broadband information to destination and troubleshooting central problems at the end user customer premises.

Broadband Cyber Security Technician

The Broadband Cyber Security Technician certificate introduces the setup, configuration, and support of internal and/or external networks. Training includes the development and maintenance of all systems, applications, security, and network configurations. Also included are troubleshooting network performance issues and creating and maintaining a disaster recovery plan. The certificate prepares the technician to recommend upgrades, patches, and new applications and equipment and to provide technical support and guidance to users.

Broadband Technician Specialist

The Broadband Specialists I (Field Technicians) certificate primarily focus on new installations of cable television and broadband services. Students

learn a variety of duties including installation, changes of service, additional outlet installation, disconnection of service, payment collection, and any special requests customers may have in regard to installation.

Associate in Applied Science

Broadband Technology – 4701037019

(Offered at BSC)

General Education:

MAT	150	College Algebra OR	3
MAT	126	Technical Algebra and Trigonometry	(3)
PHY	171	Applied Physics OR	4
		Other Natural Science with Consent of Program Coordinator	(3)
ENG	101	Writing I	3
		Social/Behavioral Science Course	3
		Oral Communications Course	3
		Heritage/Humanities	3
		General Education Credit Hours	18-19

Technical Core

ELT	110	Circuits I	5
ELT	120	Digital I	3
BBT	289	Broadband Technology Capstone	1
CIT	105	Introduction to Computers OR	3
		Digital Literacy course	(3)
CIT	111	Computer Hardware and Software	4
CIT	161	Introduction to Networks	4
ISX	100	Industrial Safety	3
BBT	100	Introduction to HFC Cable TV	3
BBT	200	Introduction to Cellular Technology	2
		Subtotal	**28**

Broadband Technician Track - 470103701

(Offered at BSC)

EET	110	Voice & Data Installer Level I	4
ETT	116	Fiber Optic Systems	3
ELT	224	Basic Telecommunications Installation and Maintenance	3
ELT	222	Mechanics of Telephony	3
EET	154	Electrical Construction I	2
EET	155	Electrical Construction I Lab	2
EET	252	Electrical Construction II	2
EET	253	Electrical Construction II Lab	2
		Track Subtotal	**21**
		Total Credit Hours	**67-68**

Broadband Telecommunications Equipment Installer Track - 470103702

(Offered at BSC)

CIT	125	Introduction to GIS	3
BBT	220	PBX Installations	2
BBT	201	Advanced Cellular Technology	2
ELT	224	Basic Telecommunications Installation and Maintenance	3
ETT	110	Voice & Data Installer Level I	4
ETT	116	Fiber Optics Systems	3
		Track Subtotal	**17**
		Total Credit Hours	**63-64**

Broadband Design and Applications Track - 470103703

(Offered at BSC)

CIT	125	Introduction to GIS	3
BBT	210	Security Systems Applications	3
BBT	101	HFC Cable-TV Operations	3
EET	154	Electrical Construction I	2
EET	155	Electrical Construction I Lab	2
EET	252	Electrical Construction II	2
EET	253	Electrical Construction II Lab	2
EET	250	National Electrical Code	4
		Track Subtotal	**21**
		Total Credit Hours	**67-68**

Certificates

Broadband Basic Installer – 4701033050

(Offered at)

ELT	110	Circuits I	5
BBT	100	Introduction to HFC Cable-TV	3
BBT	200	Introduction to Cellular Technology	2
ELT	224	Basic Telecommunications Installation and Maintenance	3
		Total	**13**

Broadband Support Technician – 4701033060

(Offered at)

ELT	110	Circuits I	5
ELT	120	Digital I	3
CIT	105	Introduction to Computers OR	3
		Digital Literacy Course	(3)
CIT	111	Computer Hardware and Software	4
CIT	161	Introduction to Networks	4
ISX	100	Industrial Safety	3
BBT	100	Introduction to HFC Cable-TV	3
BBT	200	Introduction to Cellular Technology	2
		Total	**27**

Broadband Technician Specialist – 4701033070

(Offered at)

BBT	100	Introduction to HFC Cable-TV	3
BBT	200	Introduction to Cellular Technology	2
ETT	110	Voice & Data Installer Level I	4
ETT	116	Fiber Optic Systems	3
ELT	224	Basic Telecommunications Installation and Maintenance	3
ELT	222	Mechanics of Telephony	3
EET	154	Electrical Construction I	2
EET	155	Electrical Construction I Laboratory	2
EET	252	Electrical Construction II	2
EET	253	Electrical Construction II Laboratory	2
		Total	**26**

Broadband Telecommunications Equipment Installer – 4701033080

(Offered at)

CIT	105	Introduction to Computers OR	3
		Digital Literacy Course	(3)
CIT	111	Computer Hardware and Software	4
BBT	220	PBX Installations	2
BBT	200	Introduction to Cellular Technology	2
EET	110	Voice & Data Installer Level I	4
ETT	116	Fiber Optics Systems	3
CIT	161	Introduction to Networks	4
		Technical Elective Approved by Program Coordinator	1-3
		Total	**23-25**

Broadband Cyber Security Technician – 4701033090

(Offered at)

BBT	210	Security Systems Applications	3
EET	110	Voice & Data Installer Level I	4
CIT	105	Introduction to Computers OR	3
		Digital Literacy Course	(3)
CIT	111	Computer Hardware and Software	4
CIT	161	Introduction to Networks	4
CIT	180	Security Fundamentals	3
CIT	184	Attacks and Exploits	3
CRJ	220	Introduction to Computer Forensics for Criminal Justice	3
		Total	**27**

Broadcast Television Production

The Broadcast Television Production Certificate program provides students with a hands-on introduction to the practice of video production and a comprehensive understanding of professional broadcasting in the United States. The students will be required to read, write, and reflect about concepts such as the role of the media in our society, history of broadcasting in the United States, and different job positions available in the field of broadcasting. Students will also learn all aspects of the television production process from conception to the completed program. Students will develop skills in a range of areas including script preparation, camera operation, directing, lighting, and editing. In addition to an understanding of the elements of television production, graduates will have a greater understanding of the collaborative process through creative problem solving, and critical thinking. Students will need to achieve a "C" or better in each class to remain in the program.

Certificate

Broadcast Television Production – 1001053189

(Offered at MYC)

CMS	105	Multi-Media Production I	3
CMS	141	Communications Practicum	4
CMS	155	Introduction to Broadcasting	3
CMS	266	Basic Television Production	3
COM	249	Mass Media and Mass Culture	3
		Total	**16**

Building Controls Technician

The Building Controls Technician Certificate is designed to prepare graduates for a career in the building controls field. The curriculum provides a background in electricity and HVAC technologies, and a hands-on experience in networked building control systems. Graduates will have an understanding of the importance of optimizing and maintaining building control systems in relation to sustainability and economic benefit.

Building Controls Technician – 4604013099

ACR	100	Refrigeration Fundamentals	3
ACR	101	Refrigeration Fundamentals Lab	2
ACR	102	HVAC Electricity	3
ACR	103	HVAC Electricity Lab	2
CRA	230	Building Controls I	5
CRA	232	Building Controls II	5
		Technical Electives	10
		Total	**30**

Technical Electives (Must complete 10 credit hours from the list below.)

ACR	206	Boilers	5
ACR	207	Commercial HVAC Systems	5
ACR	208	Chillers	4
		Other Technical Electives approved by the Program Coordinator	3-10

Business Studies

Four programs are offered under the broader heading of Business Studies. They are Administrative Office Technology, Business Administration Systems, Medical Information Technology, and Supply Chain Management.

Administrative Office Technology

The Administrative Office Technology program is an integrated curriculum, which prepares graduates at the certificate, diploma, and associate degree level. The Administrative Office Technology program prepares students to work in an office environment of people, process, and technologies. Job titles may include Administrative Assistant, Office Assistant, Office Manager, and Financial Assistant. These personnel use a variety of office technology and computer-based applications (word processing, electronic mail, desktop publishing, graphics, database, and spreadsheet). They support and help facilitate accurate communication and information exchange to internal and external customers on a timely basis. Technical courses combined with general education courses prepare students for today's workforce and provide a basis for lifelong learning, a necessity for the workforce of the future. Students select an area of specialty from the following tracks: financial assistant, administrative, desktop publishing, and legal. Program graduates are employed in professional office, education, government, businesses, and industries. Graduates may choose to sit for the Certified Professional Secretary Examination or Certified Administrative Professional Examination or Microsoft Office Specialists Certifications.

Progression in the Administrative Office Technology program is contingent upon achievement of a grade of "C" or better in all OST courses.

Associate in Applied Science

Administrative Office Technology – 5204027039

(Offered at BLC, ELC, JFC, HPC, MYC, OWC)

General Education:

ENG	101	Writing I	3
MAT	105	Business Mathematics OR	3
MAT	110	Applied Mathematics OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
		Heritage/Humanities	3
		Oral Communications Course	3
		Natural Sciences Course	3-4
		Social/Behavioral Sciences Course***	3
		General Education Credit Hours	18-19

Technical Core

OST	105	Introduction to Information Systems	3
OST	215	Office Procedures	3
OST	110	Document Formatting and Word Processing	3
OST	160	Records and Database Management	3
OST	210	Advanced Word Processing Application	3
OST	240	Software Integration	3
OST	235	Business Communications Technology	3
OST	275	Office Management	3
		Technical Core Credit Hours	**24**

***Association of Collegiate Business Schools and Programs (ACBSP) accredited colleges must require Economics.

Administrative Track - 520402701

(Offered at BLC, ELC, HPC, JFC, MYC, OWC)
Available Completely Online

ACT	101	Fundamentals of Accounting I OR	3
		Higher Level Accounting Course	(3)
OST	220	Administrative Office Simulation	3
OST	225	Introduction to Desktop Publishing	3
OST	295	Administrative Office Technology Internship OR	3
COE	199	Cooperative Education	(3)

Choose two courses (6 credit hours) from the following list:

BAS	160	Introduction to Business	3
ENG	102	Writing II	3
BAS	120	Personal Finance	3
OST	255	Introduction to Business Graphics	3
OST	150	Transcription and Office Technology	3
OST	108	Editing Skills for the Office Professional	3
OST	272	Presentation Graphics	3
OST	250	Advanced Desktop Publishing	3
		Elective course approved by Program Coordinator	3
		Total Administrative Track Credit Hour	**18**
		Total Credit Hours OST AAS Administrative Track	**60-61**

Desktop Publishing Track - 520402704

(Offered at BLC)
Available Completely Online

OST	130	Typography	3
OST	215	Office Procedures	3
OST	225	Introduction to Desktop Publishing	3
OST	250	Advanced Desktop Publishing	3
OST	255	Introduction to Business Graphics	3
OST	272	Presentation Graphics	3
OST	220	Administrative Office Simulation OR	3
OST	295	Administrative Office Technology Internship OR	(3)
COE	199	Cooperative Education	(2-3)
		Total Desktop Publishing Track Credit Hours	**20-21**
		Total Credit Hours OST AAS Desktop Publishing Track	**62-64**

Financial Assistant Track - 520402703

(Offered at BLC)
Available Completely Online

ACT	101	Fundamentals of Accounting I OR	3
		Higher Level Accounting Course	(3)
ACT	102	Fundamentals of Accounting II OR	3
		Higher Level Accounting Course	(3)
ACT	279	Computerized Accounting Systems	3
OST	295	Administrative Office Technology Internship OR	3
COE	199	Cooperative Education	(3)

Choose two courses (6 hours) from the following list:

OST	112	Financial Management	3
BAS	160	Introduction to Business	3
OST	225	Introduction to Desktop Publishing	3
BAS	120	Personal Finance	3
OST	213	Business Calculations for the Office Professional	3
OST	272	Presentation Graphics	3
ENG	102	Writing II	3
		Total Financial Assistant Track Credit Hours	**18**
		Total Credit Hours OST AAS Financial Assistant Track	**60-61**

Legal Administrative Track - 520402705

(Offered at BLC)

ACT	101	Fundamentals of Accounting I OR	3
		Higher Level Accounting	(3)
		Additional Accounting (ACC or ACT) course	3
BAS	267	Introduction to Business Law	3
OST	109	Legal Terminology	3
OST	221	Legal Office Simulations	3
MIT	103	Medical Office Terminology OR	3
CLA	131	Medical Terminology from Greek and Latin OR	(3)
AHS	115	Medical Terminology	(3)
		Total Legal Administrative Assistant Track Credit Hours	**18**
		Total Credit Hours OST AAS Legal Administrative Track	**60-61**

Diplomas

Administrative Assistant - 5204024019

(Offered at BLC, BSC, ELC, JFC, MYC)
Available Completely Online

General Education

OST	108	Editing Skills for the Office Professional OR	3
ENG	101	Writing I	(3)
OST	213	Business Calculations for the Office Professional OR	3
MAT	105	Business Mathematics OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
		Total General Education	**6**

Technical Courses

OST	105	Introduction to Information Systems	3
ACT	101	Fundamentals of Accounting I OR	3
		Higher Level Accounting Course	(3)
OST	110	Document Formatting and Word Processing	3
OST	160	Records and Database Management	
OST	210	Advanced Word Processing Applications	3
OST	215	Office Procedures	3
OST	225	Introduction to Desktop Publishing	3
OST	235	Business Communications Technology	3
OST	240	Software Integration	3
OST	295	Administrative Office Technology Internship OR	3
COE	199	Cooperative Education	(3)

Choose two courses (6 hours) from the following list:

BAS	160	Introduction to Business	3
ENG	102	Writing II	3
BAS	120	Personal Finance	3
OST	255	Introduction to Business Graphics	3
OST	150	Transcription and Office Technology	3
OST	108	Editing Skills for the Office Professional	3
OST	272	Presentation Graphics	3
OST	250	Advanced Desktop Publishing	3
		Total Technical Hours	**35-36**
		Total Credit Hours	**41-42**

Desktop Publishing Specialist - 5204024029

(Offered at BLC)
Available Completely Online

General Education

OST	108	Editing Skills for the Office Professional OR	3
ENG	101	Writing I	(3)
OST	213	Business Calculations for the Office Professional OR	3
MAT	105	Business Mathematics OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
		Total General Education	**6**

Technical Courses

OST	105	Introduction to Information Systems	3
OST	110	Document Formatting and Word Processing	3
OST	130	Typography	3
OST	160	Records and Database Management	3
OST	210	Advanced Word Processing Applications	3
OST	215	Office Procedures	3
OST	225	Introduction to Desktop Publishing	3
OST	235	Business Communication Technology	3
OST	240	Software Integration	3
OST	250	Advanced Desktop Publishing	3
OST	255	Introduction to Business Graphics	3
OST	272	Presentation Graphics	3
OST	220	Administrative Office Simulation OR	3
OST	295	Administrative Office Technology Internship OR	(3)
COE	199	Cooperative Education	(2-3)
		Total Technical Hours	**38-39**
		Total Credit Hours	**44-45**

Financial Assistant - 5204024049

(Offered at BLC, BSC, ELC, JFC)
Available Completely Online

General Education

OST	108	Editing Skills for the Office Professional OR	3
ENG	101	Writing I	(3)
OST	213	Business Calculations for the Office Professional OR	3
MAT	105	Business Mathematics OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
		Total General Education	**6**

Technical Courses

OST	105	Introduction to Information Systems	3
ACT	101	Fundamentals of Accounting I OR	3
		Higher Level Accounting Course	(3)
ACT	102	Fundamentals of Accounting II OR	3
		Higher Level Accounting Course	(3)
ACT	279	Computerized Accounting Systems	3
OST	110	Document Formatting and Word Processing	3
OST	160	Records and Database Management	3
OST	215	Office Procedures	3
OST	240	Software Integration	3
OST	295	Administrative Office Technology Internship OR	3
COE	199	Cooperative Education	(2-3)

Choose two courses (6 hours) from the following list:

BAS	160	Introduction to Business	3
ENG	102	Writing II	3
BAS	120	Personal Finance	3
OST	255	Introduction to Business Graphics	3
OST	150	Transcription and Office Technology	3
OST	108	Editing Skills for the Office Professional	3
OST	272	Presentation Graphics	3
OST	250	Advanced Desktop Publishing	3
		Total Technical Hours	**32-33**
		Total Credit Hours	**38-39**

Legal Office Assistant - 5204024059

(Offered at BLC)

General Education

OST	108	Editing Skills for the Office Professional OR	3
ENG	101	Writing I	(3)
OST	213	Business Calculations for the Office Professional OR	3
		Higher Level Quantitative Reasoning Course	(3)
		Total General Education	**6**

Technical Courses

OST	105	Introduction to Information Systems	3
ACT	101	Fundamentals of Accounting I OR	3
		Higher Level of Accounting Course	(3)
BAS	267	Introduction to Business Law	3
OST	109	Legal Terminology	3
OST	221	Legal Office Simulations	3
OST	215	Office Procedures	3
OST	110	Document Formatting and Word Processing	3
OST	160	Records and Database Management	3
OST	235	Business Communications Technology	3
OST	240	Software Integration	3
OST	295	Administrative Office Technology Internship OR	3
COE	199	Cooperative Education	(3)

Choose one course (3 hours) from the following:

BAS	160	Introduction to Business	3
ENG	102	Writing II	3
BAS	120	Personal Finance	3
OST	255	Introduction to Business Graphics	3
OST	150	Transcription and Office Technology	3
OST	108	Editing Skills for the Office Professional	3
OST	272	Presentation Graphics	3
OST	250	Advanced Desktop Publishing	3
		Total Technical Hours	**36**
		Total Credit Hours	**42**

Office Assistant - 5204024039

(Offered at BLC, BSC, ELC, JFC, MYC)
Available Completely Online

General Education

OST	108	Editing Skills for the Office Professional- OR	3
ENG	101	Writing I	(3)
OST	213	Business Calculations for the Office Professional OR	3
MAT	105	Business Mathematics OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
		Total General Education	**6**

Technical Courses

OST	105	Introduction to Information Systems	3
OST	110	Document Formatting and Word Processing	3
OST	160	Records and Database Management	3
OST	210	Advanced Word Processing Applications	3
OST	215	Office Procedures	3
OST	235	Business Communications Technology	3
OST	240	Software Integration	3
OST	295	Administrative Office Technology Internship OR	3
COE	199	Cooperative Education	(3)

Choose two courses (6 hours) from the following list:

BAS	160	Introduction to Business	3
ENG	102	Writing II	3
BAS	120	Personal Finance	3
OST	255	Introduction to Business Graphics	3
OST	150	Transcription and Office Technology	3
OST	108	Editing Skills for the Office Professional	3
OST	272	Presentation Graphics	3
OST	250	Advanced Desktop Publishing	3
		Total Technical Hours	**30**
		Total Credit Hours	**36**

Certificates

Administrative - 5204023039

(Offered at BLC, BSC, HPC, JFC, MYC, OWC)

Available Completely Online

OST	108	Editing Skills for the Office Professional OR	3
ENG	101	Writing I	(3)
OST	105	Introduction to Information Systems	3
OST	213	Business Calculations for the Office Professional OR	3
MAT	105	Business Mathematics OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
OST	110	Document Formatting and Word Processing	3
OST	215	Office Procedures	3
OST	240	Software Integration	3
OST	235	Business Communications Technology	3
OST	160	Records and Database Management	3
ACT	101	Fundamental of Accounting I OR	3
		Higher level Accounting Course	(3)
OST	150	Transcription and Office Technology	3
		Total Credit Hours	**30**

Basic Business Presentation - 5204023119

(Offered at BLC)

Available Completely Online

OST	105	Introduction to Information Systems	3
OST	108	Editing Skills for the Office Professional OR	3
ENG	101	Writing I	(3)
OST	225	Introduction to Desktop Publishing	3
OST	255	Introduction to Business Graphics	3
OST	272	Presentation Graphics	3
		Total Credit Hours	**15**

Data Entry Operator - 5204023079

(Offered at BLC, BSC, ELC, HEC, HPC, JFC, MYC, OWC,WKC)

Available Completely Online

OST	105	Introduction to Information Systems	3
OST	110	Document Formatting and Word Processing	3
		Total Credit Hours	**6**

Desktop Publishing - 5204023099

(Offered at BLC, BSC)

Available Completely Online

ENG	101	Writing I OR	3
OST	108	Editing Skills for the Office Professional	(3)
OST	213	Business Calculations for the Office Professional OR	3
MAT	105	Business Mathematics OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
OST	105	Introduction to Information Systems	3
OST	110	Document Formatting and Word Processing	3
OST	130	Typography	3
OST	160	Records and Database Management	3
OST	225	Introduction to Desktop Publishing	3
OST	255	Introduction to Business Graphics	3
OST	272	Presentation Graphics	3
		Total Credit Hours	**27**

Financial Assistant Clerk - 5204023129

(Offered at BLC, BSC, HPC, JFC, OWC)

Available Completely Online

OST	105	Introduction to Information Systems	3
ACT	101	Fundamentals of Accounting I OR	3
		Higher Level Accounting Course	(3)
OST	108	Editing Skills for the Office Professional OR	3
ENG	101	Writing I	(3)
OST	110	Document Formatting and Word Processing	3
OST	160	Records and Database Management	3
OST	213	Business Calculations for the Office Professional OR	3
MAT	105	Business Mathematics OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
		Total Credit Hours	**18**

Financial Assistant Trainee - 5204023139

(Offered at BLC, BSC, HPC, JFC, OWC)

Available Completely Online

OST	105	Introduction to Information Systems	3
ACT	101	Fundamentals of Accounting I OR	3
		Higher Level Accounting Course	(3)
OST	110	Document Formatting and Word Processing	3
OST	213	Business Calculations for the Office Professional OR	3
MAT	105	Business Mathematics OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
		Total Credit Hours	**12**

Financial Record Keeper - 5204023069

(Offered at BLC, BSC, JFC, OWC)

Available Completely Online

OST	105	Introduction to Information Systems	3
ACT	101	Fundamentals of Accounting I OR	3
		Higher Level Accounting Course	(3)
		Higher Level Accounting Course	3
OST	108	Editing Skills for the Office Professional OR	3
ENG	101	Writing I	(3)
OST	110	Document Formatting and Word Processing	3
OST	112	Financial Management OR	3
		Course Approved by Program Coordinator	(3)
OST	160	Records and Database Management	3
OST	213	Business Calculations for the Office Professional OR	3
MAT	105	Business Mathematics OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
OST	215	Office Procedures	3
OST	240	Software Integration	3
		Total Credit Hours	**30**

Integrated Office Skills - 5204023059

(Offered at BLC, BSC, ELC, HPC, JFC, OWC,WKC)

OST	108	Editing Skills for the Office Professional OR	3
ENG	101	Writing I	(3)
OST	105	Introduction to Information Systems	3
OST	110	Document Formatting and Word Processing	3
OST	160	Records and Database Management O	3
OST	210	Advanced Word Processing Applications	3
OST	215	Office Procedures	3
OST	240	Software Integration	3
		Total Credit Hours	**21**

Legal Receptionist - 5204023149

(Offered at BLC)

OST	105	Introduction to Information Systems	3
OST	108	Editing Skills for the Office Professional OR	3
ENG	101	Writing I	(3)
OST	110	Document Formatting and Word Processing	3
OST	160	Records and Database Management	3
OST	109	Legal Terminology	3
		Total Credit Hours	**15**

Receptionist - 5204023089

(Offered at BLC, BSC, ELC, HPC, JFC, MYC, OWC,WKC)

Available Completely Online

OST	105	Introduction to Information Systems	3
OST	108	Editing Skills for the Office Professional OR	3
ENG	101	Writing I	(3)
OST	160	Records and Database Management	3
OST	110	Document Formatting and Word Processing	3
		Total Credit Hours	**12**

Business Administration Systems

The Business Administration Systems Program prepares students for a variety of careers in business. A core curriculum provides students with a foundation of knowledge applicable to any business career. The Business Administration Systems Program offers an Associate in Applied Science degree, diplomas and a variety of certificates in the areas of Accounting, Entrepreneurship, Financial Perspectives, Business, Hospitality Management, Human Resource Management, Industrial Supervisor, Informatics, Leadership, Management, Office Systems, Operations Management, Real Estate Management, Sales, Small Business Management, and Team Leadership.

The curriculum is designed for those who seek entry level jobs as well as for currently employed individuals wishing to enhance their skills. A student specializes by choosing from the following Tracks, Diplomas and Certificates:

The Accounting Track / Diploma/ Certificate leads to careers in accounting including bookkeeper, accounting clerk, cost payroll clerk and positions using microcomputer-based systems.

The Business Management Track leads to careers for planning and managing people and other resources within organizations.

The Equine Business Management Track / Certificate provides the knowledge and skills students need to take advantage of various employment opportunities within the horse industry.

The Hospitality Management Track / Certificate prepares students for careers directing specific aspects of hospitality operations and for overall hospitality management.

The Human Resource Management Track / Certificate prepares students for entry-level positions in the human resource field and related occupations.

The Informatics Track / Diploma/ Certificate prepares students for careers in business including Business Analysts and positions that query and report on the business's key performance indicators and success factors.

The Management Track / Certificate prepares the student with broad-based management knowledge and skills which lead to a variety of positions in organizations.

The Marketing and Retailing Track prepares for careers in sales, merchandise management, buying, department supervising, or retail management.

The Office Systems Track / Diploma / Certificate prepares the student with a broad base of knowledge and skills needed for a variety of positions in an office.

The Real Estate Management Track / Certificate leads to a career in real estate which may include sales, finance, counseling, development, marketing analysis, valuation, and/or property management.

The Organizational Leadership Diploma curriculum is designed to prepare students to manage a department or to become team leaders in team-based or self-managed organizations.

The Small Business Management Diploma / Certificate curricula is designed to prepare students for the position of entrepreneur and business owner and offers the prospective business owner the fundamentals of starting and operating a business.

The Accounting Recordkeeping Specialist Certificate prepares students for entry level employment as a bookkeeper.

The Advanced Business Administration Certificate is designed to be a building block to complete the Associate in Applied Science Degree, Business Administration Core courses.

The Business Certificate prepares the student for positions in supervision, management and general business.

The Business Transfer Certificate is designed to provide the business transfer student an exit point by offering business preparation courses that will transfer to a four-year institution.

The Entrepreneurship Certificate is focused on providing foundational business knowledge necessary to turn a project, idea, product or service into a business venture. Certificate graduates will learn how to prepare a business plan, identify sources of venture and operating capital, gain product development knowledge, learn methods of marketing their idea or business, learn how to read and understand financial statements, and gain personal and organization leadership qualities that will provide business tools to new or current entrepreneurs.

The Financial Perspectives Certificate prepares the student for entry-level positions in accounting, financial services and small business management.

The Industrial Supervisor certificate prepares the student in the field of industrial front-line supervision.

The Leadership Certificate enables the student to qualify for leadership positions, work effectively in teams, lead problem solving work groups, understand the conflict resolution processes and plan effectively.

The Operations Management Certificate provides students with the knowledge and skills needed to effectively function as first-line supervisors in an operations environment whether in distribution, services, or manufacturing. It will also increase the understanding of the operations function for non-operations students who will be working in a distribution, services or manufacturing organization.

The Payroll Accounting Specialist Certificate prepares the student for entry level work in payroll processing.

The Sales Certificate prepares the student for a career in sales.

The Supervisory Management Certificate prepares the student in the field of front-line supervision.

The Team Leadership Certificate prepares the student for a career in team leadership, supervision and / or management in a variety of different organizations. Modules are available.

The Supervisory Management Certificate prepares the student in the field of front-line supervision.

Associate in Applied Science

Business Administration Systems - 5202017129

(Offered at ASC, BSC, BLC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

General Education:

ENG	101	Writing I	3
COM	181	Basic Public Speaking OR	3
COM	252	Introduction to Interpersonal Communication	(3)
ECO		Any Economics Course	3
MAT	105	Business Mathematics OR	3

MAT	110	Applied Mathematics OR	(3)
MAT	150	College Algebra OR Higher Quantitative Reasoning	(3)
		Heritage/Humanities	3
		Natural Sciences	3
		Subtotal	**18**

Technical Courses:

CIT	105	Introduction to Computers OR	3
OST	105	Introduction to Information Systems	(3)
ENG	102	Writing II OR	3
OST	235	Business Communications Technology	(3)
CIT	130	Productivity Software OR	3
OST	240	Software Integration	(3)
BAS	160	Introduction to Business	3
BAS	250	Business Employability Seminar	1
BAS	267	Introduction to Business Law	3
BAS	282	Principles of Marketing OR	3
MKT	282	Principles of Marketing	(3)
BAS	283	Principles of Management OR	3
MGT	283	Principles of Management	(3)
ACC	201	Financial Accounting OR	3
ACT	101	Fundamentals of Accounting I AND	(3)
ACT	102	Fundamentals of Accounting II	(3)
ACC	202	Managerial Accounting	3
		Technical	**28-31**
		Core Subtotal	**46-49**

Business Administration Systems Tracks

Accounting Track - 520201701

(Offered at ASC, BSC, ELC, GTW, HEC, HPC, MDC, MYC, OWC, SKY, SMC,WKC)
Available Completely Online

Required:

ACT	279	Computerized Accounting Systems	3
ACT	281	Individual Taxation	3
ACT	286	Financial Accounting Topics	3

Choose 6 hours (not duplicated from the core) from the following Technical Courses. Students may select other courses as approved by the Business Administration Systems Program Coordinator.

ACT	196	Payroll Accounting	3
ACT	277	Managerial Accounting Topics	3
BAS	212	Introduction to Financial Management	3
ACT	290	Selected Topics in Accounting (Topic)	1-3
ACT	295	Corporate and Partnership Taxation	3
BAS	110	Worksheets in Business Applications	3
BAS	120	Personal Finance	3
CIT	234	Advanced Productivity Software	3
CIT	236	Advanced Data Organization	3
COE	199	Cooperative Education: (Business Administration) OR	1-3
BAS	280	Business Internship	(1-3)
		Subtotal	**15**
		Total Credits	**61-64**

Business Management Track – 520201717

(Offered at BLC, HZC, HEC, OWC)

Note: Students in this track must take ENG 102, MAT 150 or higher quantitative reasoning and ECO 201 or ECO 202 as part of the core.

Required:

MGT	200	Small Business Management OR	3
MGT	256	Operations Management	(3)
MGT	274	Human Resource Management OR	3
MGT	287	Supervisory Management	(3)
MGT	292	Strategic Management	3
ENG	203	Business Writing	3
MGT	101	Quality Management Principles	3

Choose a total of 3 hours from the following:

BAS	120	Personal Finance	3
MGT	200	Small Business Management	3
MGT	240	Business Ethics and Self-Management	3
MGT	256	Operations Management	3
MGT	258	Project Management	3
MGT	274	Human Resource Management	3
MGT	287	Supervisory Management	3
MGT	288	Self-Management	3
MKT	155	Personal Selling	3
MKT	290	Advertising and Promotion	3
MKT	291	Retail Management	3
MKT	293	Buying and Merchandising	3
MGT	299	Selected Topics in Business Management: (Topic)	1-3
MKT	299	Selected Topics in Marketing: (Topic)	1-3
IMD	275	Workplace Management	3
COE	199	Cooperative Education	1-4
ECO	202	Principles of Macroeconomics	3
REA	100	Real Estate Principles I	3
REA	120	Real Estate Marketing	3
MA	123	Elementary Calculus	3
STA	291	Statistical Methods	3
PSY	110	General Psychology OR	3
SOC	101	Introduction to Sociology	(3)
		Subtotal	**18**
		Total Credits	**64-67**

Equine Business Management Track –520201718

(Offered at BLC, OWC)

Required:

EQS	110	Basic Equine Physiology	3
EQS	103	Racehorse Care	1
EQS	104	Racehorse Care Lab OR	3
EQS	299	Equine Internship	(1-9)
EQS	118	Equine Bloodstock	3
EQM	120	Introduction to Commercial Breeding Practices	3
EQS	130	Introduction to the Racing Industry	3
EQS	240	Equine Legal and Business Principles	3
		Subtotal	19
		Total Credits	65-68

Hospitality Management Track - 520201703

(Offered at BSC, SMC,WKC)

Required:

HOS	100	Introduction to Hospitality	3
CUL	100	Culinary Arts Profession	2
HOS	282	Tourism Marketing	3

Choose 9 hours (not duplicated from the core) from the following Technical Courses. Students may select other courses (HOS, CUL, & BAS) as approved by the Business Administration Systems Program Coordinator.

BAS	200	Small Business Management	3
BAS	274	Human Resource Management	3
BAS	290	Management, Ethics & Society	3
COE	199	Cooperative Education: Business Administration OR	1-3
BAS	280	Business Internship	(1-3)
CUL	200	Sanitation & Safety	2
CUL	105	Applied Fundamental of the Culinary Arts Profession	2
CUL	280	Cost & Control	3
HOS	160	Security for the Hospitality Industry	3
HOS	200	Cultural Heritage Tourism	3
HOS	210	Front Office Management	3
HOS	220	Housekeeping & Maintenance Management	3
CUL	270	Human Relations Management	3
		Subtotal Credits	**17**
		Total	**63-66**

Human Resource Management Track - 520201715

(Offered at BLC, ELC, HEC, MDC, SKY,WKC)
Available Completely Online

Required:

BAS	274	Human Resource Management	3
BAS	287	Supervisory Management	3
ACT	196	Payroll Accounting	3

Choose 9 hours (not duplicated from the core) from the following Approved Technical Courses with no more than 3 credit hours from IFM courses to count towards graduation:

BAS	280	Business Internship OR	1-4
COE	199	Cooperative Education	(1-4)
BAS	284	Applied Management Skills	3
BAS	288	Person & Organizational Leadership	3
BAS	290	Management, Ethics & Society	3
BAS	299	Selected Topics in Management: (Track Topic)	.1-3
ISX	100	Industrial Safety	3
OST	275	Office Management	3
QMS	101	Introduction to Quality Systems	3
QMS	202	Performance Management	3
PSY	180	Human Relations	3
IFM	111	Client-Side Informatics Software	3
IFM	128	Principles of Informatics	3
IFM	130	Business Data Communications	3
IFM	211	Collaboration Software	3
IFM	215	Information Systems Analysis	3
IFM	225	Advanced Informatics	3
IFM	235	Information Systems and Business Intelligence	3
		Subtotal	**18**
		Total Credits	**64-67**

Informatics Track - 520201716

(Offered at GTW, HEC, MYC, SMC)

Required:

IFM	128	Principles of Informatics	3
CIT	120	Computational Thinking	3
CIT	170	Database Design Fundamentals	3
IFM	215	Information Systems Analysis	3

Choose 6 hours from the following Technical Courses. Students may select other courses (CIT & BAS)

as approved by the Business Administration Systems Program Coordinator.

IFM	130	Business Data Communication	3
IFM	235	Information Systems and Business Intelligence	3
MGT	258	Project Management	3
IFM	111	Client-Side Informatics Software	3
IFM	225	Advanced Informatics	3
IFM	211	Collaboration Software	3
CIT	150	Internet Technologies	3
		Subtotal	**18**
		Total Credits	**64-67**

Management Track - 520201708

(Offered at ASC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)
Available Completely Online

Required:

BAS	212	Introduction to Financial Management OR	3
		Second Quantitative Reasoning Course*	(3)
BAS	284	Applied Management Skills	3

*Must be a General Education Quantitative Reasoning that is different from core Quantitative Reasoning selection.

Choose 11-12 hours (not duplicated from the core) from the following Management and/or Technical Courses with no more than 3 hours selected from Technical Courses. Students may select other courses as approved by the Business Administration Systems Program Coordinator.

Management Courses

BAS	170	Entrepreneurship	3
BAS	200	Small Business Management	3
BAS	212	Introduction to Financial Management	3
BAS	289	Operations Management	3
BAS	290	Management, Ethics & Society	3
BAS	256	International Business	3
BAS	260	Professional Development and Protocol	2
BAS	274	Human Resource Management	3
BAS	285	Problems in Marketing and Management	3
BAS	287	Supervisory Management	3
BAS	288	Personal and Organizational Leadership	3
BAS	291	Retail Management	3
BAS	299	Selected Topics in Management: (Track Topic)	1-3
OST	275	Office Management	3
QMS	101	Introduction to Quality Systems	3
QMS	201	Customer Service Improvement Skills	3
QMS	202	Performance Management	3

Technical Courses:

ACT	196	Payroll Accounting	3
ACT	177	Entrepreneurial Accounting	3
BAS	110	Worksheets in Business Applications	3
BAS	120	Personal Finance	3
CIT	234	Advanced Productivity Software	3
CIT	236	Advanced Data Organization	3
ENG	203	Business Writing OR	(3)
OST	235	Business Communications Technology	(3)
COE	199	Cooperative Education: (Business Administration)	1-4
		OR	
BAS	280	Business Internship	(1-4)
ECO	150	Introduction to Global Economics	3
ECO	201	Principles of Microeconomics OR	3
ECO	202	Principles of Macroeconomics	(3)
LOM	100	Introduction to Logistics Management	3
CIT	155	Web Page Development	3
IFM	111	Client-Side Informatics Software	3
IFM	128	Principles of Informatics	3
IFM	130	Business Data Communications	3
IFM	211	Collaboration Software	3
IFM	215	Information Systems Analysis	3
IFM	225	Advanced Informatics	3
IFM	235	Information Systems and Business Intelligence	3
		Subtotal	**17-18**
		Total Credit	**63-67**

Marketing and Retailing Track –520201719

(Offered at BLC, OWC)

Note: Students in this track must take ENG 102, MAT 150 or higher quantitative reasoning and ECO 201 or ECO 202 as part of the core.

Required:

MKT	155	Personal Selling OR	3
COE	199	Cooperative Education	(3)
MKT	290	Advertising and Promotion	3
MKT	291	Retail Management	3
MKT	293	Buying and Merchandising	3
ENG	203	Business Writing	3

Choose 3 hours from the following:

BAS	120	Personal Finance	3
MGT	200	Small Business Management	3
MGT	258	Project Management	3
MGT	288	Self-Management	3
MKT	299	Selected Topics in Marketing: (Topic)	1-3

COE	199	Cooperative Education	1-4
ECO	202	Principles of Macroeconomics	3
		Subtotal	**18**
		Total Credits	**64-67**

Office Systems Track - 520201705

(Offered at BSC, GTW, HEC, HZC, MDC, MYC, SMC,WKC)
Available Completely Online

Required:

OST	110	Document Formatting and Word Processing	3
OST	210	Advanced Word Processing Applications	3
OST	215	Office Procedures	3
OST	220	Administrative Office Simulations	3

Choose 6 hours (not duplicated from the core) from the following Technical Courses. Students may select other courses as approved by the Office Systems Program Coordinator.

OST	150	Transcription and Office Technology	3
OST	160	Records and Database Management	3
OST	216	Selected Topics in Office Systems: (Topic)	1-3
OST	235	Business Communications Technology	3
OST	295	Office Systems Technology Internship OR	1-3
COE	199	Cooperative Education: (Business Technology) OR	(1-3)
BAS	280	Business Internship	(1-3)
OST	275	Office Management	3
		Subtotal	**18**
		Total Credits	**64-67**

Real Estate Management Track - 520201706

(Offered at BSC, BLC, ELC,WKC)

Required:

REA	100	Real Estate Principles I	3
REA	121	Appraising	3
REA	225	Real Estate Finance	3
REA	230	Real Estate Law	3

Choose 6 hours (not duplicated from the core) from the following Technical Courses. Students may select other courses as approved by the Real Estate Program Coordinator.

REA	120	Real Estate Marketing	3
REA	122	Construction and Blueprints	3
REA	200	Real Estate Principles II	3
REA	201	Property Management	3
REA	202	Real Estate Investments I	3
REA	203	Commercial and Industrial Property	3
REA	204	Land Planning and Development	3
REA	205	Farm Brokerage	3
REA	212	Real Estate Investments II	3
REA	220	Real Estate Brokerage Management	3
COE	199	Cooperative Education: (Business Administration)	1-4
		OR	
BAS	280	Business Internship	(1-4)
		Subtotal	**18**
		Total Credits	**64-67**

Diplomas

Accounting- 5202014049

(Offered at BSC, GTW, HPC, MYC, OWC, SMC,WKC)

General Education:

Area 1 =

ENG	101	Writing I	3
ENG	102	Writing II OR	3
ENG	203	Business Writing OR	(3)
OST	235	Business Communications Technology	(3)
		Oral Communications	3

Area 2 =

		Quantitative Reasoning course	3
		(Excluding MAT 205, MAT 206, STA 200, STA 210)	
		General Education Subtotal	**12**

Required Technical:

		Digital Literacy	0-3
CIT	130	Productivity Software OR	3
OST	240	Software Integration	(3)
ACC	201*	Financial Accounting OR	3
ACT	101	Fundamentals of Accounting I AND	(3)
ACT	102	Fundamentals of Accounting II	(3)
ACT	279	Computerized Accounting Systems	3
COE	199	Cooperative Education OR	3
BAS	280	Business Internship	(3)
		Additional accounting hours approved by Program Coordinator.	6
		Required Technical Subtotal	**18-24**

Related Courses (Choose 6 credit hours from the following list with Program Coordinator Approval)

BAS	120	Personal Finance	3
BAS	267	Introduction to Business Law	3
BAS	283	Principles of Management	3
BAS	200	Small Business Management	3
BAS	260	Professional Development and Protocol	2
		Economics course	3
		Quantitative Reasoning course	3
		Total Credits	**39-45**

*No course can be used to fulfill more than one requirement.

Informatics - 5202014059

(Offered at HEC, MYC, SMC)

General Education:

Area 1 =

ENG	101	Writing I	3

Area 2 =

ECO		Any Economics Course	3
		General Education Subtotal	**6**

Required Technical:

CIT	105	Introduction to Computers OR	3
OST	105	Introduction to Information Systems	(3)
BAS	160	Introduction to Business	3
BAS	283	Principles of Management	3
BAS	282	Principles of Marketing	3
ACC	201	Financial Accounting OR	3
ACT	101	Fundamentals of Accounting I AND	(3)
ACT	102	Fundamentals of Accounting II	(3)
IFM	128	Principles of Informatics	3
CIT	170	Database Design Fundamentals	3
IFM	215	Information Systems Analysis	3
BAS	280	Business Internship OR	1-3
COE	199	Cooperative Education	(1-4)
		Required Technical Subtotal	**25-31**

Related Courses (Choose 6 hours from the following Technical Courses. Students may select other courses as approved by the Business Administration Systems Program Coordinator.)

IFM	130	Business Data Communication	3
IFM	235	Information Systems and Business Intelligence	3
MGT	258	Project Management	3
IFM	111	Client-Side Informatics Software	3
IFM	225	Advanced Informatics	3
IFM	211	Collaboration Software	3
CIT	150	Internet Technologies	3
CIT	120	Computational Thinking	3
		Approved Technical Subtotal	**6**
		Total Credits	**40-45**

No course can be used to fulfill more than one requirement

Office Systems - 5202014019

(Offered at BSC, HZC, GTW, MDC, SMC,WKC)

General Education:

Area 1 =

ENG	101	Writing I OR	3
COM	181	Basic Public Speaking OR	(3)
COM	252	Introduction to Interpersonal Communication	(3)

Area 2 =

ECO		Any Economics Course	3
		General Education Subtotal	**6**

Required Technical:

CIT	105	Introduction to Computers OR	3
OST	105	Introduction to Information Systems	(3)
ACC	201	Financial Accounting OR	3
ACT	101	Fundamentals of Accounting I AND	(3)
ACT	102	Fundamentals of Accounting II	(3)
BAS	160	Introduction to Business	3
OST	110	Document Formatting and Word Processing	3
OST	210	Advanced Word Processing Applications	3
OST	213	Business Calculations for the Office Professional	3
OST	215	Office Procedures	3
OST	220	Administrative Office Simulations	3
CIT	130	Productivity Software OR	3
OST	240	Software Integration	(3)
BAS	280	Business Internship OR	1-4
COE	199	Cooperative Education	(1-3)
		Required Technical Subtotal	**28-34**

Choose 6 hours (not duplicated from the core) from the following Technical Courses. Students may select other courses as approved by the Office Systems Program Coordinator.

OST	150	Transcription and Office Technology	3
OST	160	Records and Database Management	3
OST	216	Selected Topics in Office Systems: (Topic)	1-3
OST	235	Business Communications Technology	3
OST	295	Office Systems Technology Internship OR	1-3
OST	275	Office Management	3
		Approved Technical Courses	6
		Total Credits	**40-46**

Organizational Leadership - 5202014029

(Offered at BSC, ELC, JFC, MDC, OWC, SKY, SMC,WKC)

Available Completely Online

General Education:

Area 1 =

ENG	101	Writing I OR	3
COM	181	Basic Public Speaking OR	(3)
COM	252	Introduction to Interpersonal Communication	(3)

Area 2 =

ECO		Any Economics Course	3
		General Education Subtotal	**6**

Required Technical:

CIT	105	Introduction to Computers OR	3
OST	105	Introduction to Information Systems	(3)
BAS	160	Introduction to Business	3
BAS	283	Principles of Management	3
BAS	284	Applied Management Skills	3
BAS	287	Supervisory Management	3
BAS	288	Personal and Organizational Leadership	3
ACC	201	Financial Accounting OR	3
ACT	101	Fundamentals of Accounting I AND	(3)
ACT	102	Fundamentals of Accounting II	(3)
BAS	280	Business Internship OR	1-3
COE	199	Cooperative Education	(1-4)
		Required Technical Subtotal	**22-28**

Choose 11-12 hours (not duplicated from the core) from the following Technical Courses. Students may select other courses as approved by the Business Administration Systems Program Coordinator.

BAS	212	Introduction to Financial Management	3
BAS	260	Professional Development and Protocol	2
BAS	267	Introduction to Business Law	3
BAS	274	Human Resource Management	3
BAS	282	Principles of Marketing	3
BAS	290	Management, Ethics & Society	3
OST	275	Office Management	3
ACC	202	Managerial Accounting	3
CIT	130	Productivity Software OR	3
OST	240	Software Integration	(3)
QMS	101	Introduction to Quality Systems	3
		Quantitative Reasoning Course	3
		Approved Technical Courses	**11-12**
		Total Credits	**39-46**

Small Business Management - 5202014039

(Offered BSC, ELC, HZC, JFC, MDC, SKY, SMC,WKC)

Available Completely Online

General Education:

Area 1 =

ENG	101	Writing I OR	3
COM	181	Basic Public Speaking OR	(3)
COM	252	Introduction to Interpersonal Communication	(3)

Area 2 =

ECO		Any Economics Course	3
		General Education Subtotal	**6**

Required Technical:

CIT	105	Introduction to Computers OR	3
OST	105	Introduction to Information Systems	(3)
BAS	160	Introduction to Business OR	3
BAS	170	Entrepreneurship*	(3)
BAS	200	Small Business Management	3
BAS	212	Introduction to Financial Management * OR	3
		Second Quantitative Reasoning Course*	(3)
BAS	267	Introduction to Business Law	3
BAS	282	Principles of Marketing	3
BAS	283	Principles of Management	3
ACC	201	Financial Accounting OR	3
ACT	177	Entrepreneurial Accounting OR	(3)
ACT	101	Fundamentals of Accounting I AND	(3)
ACT	102	Fundamentals of Accounting II	(3)
BAS	280	Business Internship OR	1-3
COE	199	Cooperative Education	(1-4)
		Required Technical Subtotal	**25-31**

Choose 6 hours (not duplicated from the core) from the following Technical Courses. Students may select other courses as approved by the Business Administration Systems Program Coordinator.

BAS	212	Introduction to Financial Management *	3
BAS	170	Entrepreneurship*	3
BAS	274	Human Resource Management	3
BAS	284	Applied Management Skills	3
BAS	287	Supervisory Management	3
BAS	288	Personal and Organizational Leadership	3
BAS	290	Management, Ethics & Society	3
ACT	196	Payroll Accounting	3
ACC	202	Managerial Accounting	3
CIT	130	Productivity Software OR	3
OST	240	Software Integration	(3)
QMS	101	Introduction to Quality Systems	3
QMS	201	Customer Service Improvement Skills	3
		Approved Technical Courses	**6**
		Total Credits	**37-43**

*Not allowed as an Approved Technical Course if course has been taken as a required course.

Certificates

Accounting - 5202013119

(Offered at ASC, BSC, ELC, GTW, HEC, HPC, HZC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

Available Completely Online

Required:

ACC	201	Financial Accounting OR	3
ACT	101	Fundamentals of Accounting I AND	(3)
ACT	102	Fundamentals of Accounting II	(3)
ACC	202	Managerial Accounting	3

Choose 12 hours from the following Technical Courses. Students may select other courses as approved by the Business Administration Systems Program Coordinator

ACT	196	Payroll Accounting	3
ACT	277	Managerial Accounting Topics	3
ACT	279	Computerized Accounting Systems	3
ACT	281	Individual Taxation	3
ACT	286	Financial Accounting Topics	3
ACT	290	Selected Topics in Accounting (Topic)	1-3
ACT	295	Corporate and Partnership Taxation	3
BAS	120	Personal Finance	3
BAS	212	Introduction to Financial Management	3
CIT	234	Advanced Productivity Software	3
CIT	236	Advanced Data Organization	3
COE	199	Cooperative Education: (Business Administration) OR	3
BAS	280	Business Internship	(1-4)
		Total Credits	**18-21**

Accounting Recordkeeping Specialist - 5202013429

(Offered at ASC, BSC, ELC, HEC, OWC, MDC, MYC, SEC, SKY,WKC)

Required:

ACC	201	Financial Accounting OR	3
ACT	101	Fundamentals of Accounting I AND	(3)
ACT	102	Fundamentals of Accounting II	(3)
ACT	196	Payroll Accounting	3
ACT	279	Computerized Accounting Systems	3
ACT	281	Individual Taxation	3
ACT	286	Financial Accounting Topics	3
CIT	105	Introduction to Computers OR	3
OST	105	Introduction to Information Systems	(3)
		Total Credits	**18-21**

Advanced Business Administration - 5202013129

(Offered at ASC, BSC, ELC, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

Available Completely Online

Required:

BAS	282	Principles of Marketing	3
BAS	283	Principles of Management	3
BAS	267	Introduction to Business Law	3
BAS	284	Applied Management Skills	3
CIT	130	Productivity Software OR	3
OST	240	Software Integration	(3)
		Total Credits	**15**

Business Transfer - 5202013149

(Offered at ASC, BSC, ELC, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

Available Completely Online

Required:

ACC	201	Financial Accounting	3
ACC	202	Managerial Accounting	3
ECO	201	Principles of Microeconomics	3
ECO	202	Principles of Macroeconomics	3
STA	220	Statistics	3
		Total Credits	**15**

Entrepreneurship – 5202013379

(Offered at ELC, GTW, HEC, HPC, MDC, OWC, SEC, SKY,WKC)

Required:

ACC	201	Financial Accounting OR	3
ACT	177	Entrepreneurial Accounting	(3)
BAS	170	Entrepreneurship	3
BAS	282	Principles of Marketing	3
BAS	288	Personal and Organizational Leadership	3
		Total Credits	**12**

Equine Business Management – 5202013479

(Offered at BLC, HEC, OWC)

Required:

EQM	100	Introduction to Equine Studies	3
EQM	120	Introduction to Commercial Breeding	3
EQM	140	Equine Business Management I	2
EQM	160	Introduction to Business	3
EQM	240	Equine Business Management II	2
EQM	242	Equine Law	3
EQM	246	Current Trends in the Equine Industry	1
PSY	110	General Psychology	3
MGT	101	Quality Management Principles	3
		Total Credits	23

Financial Perspectives - 5202013159

(Offered at ASC, BSC, ELC, GTW, HEC, HPC, HZC, MYC, OWC, SEC, SMC,WKC)

Available Completely Online

Required:

ACC	201	Financial Accounting OR	3
ACT	101	Fundamentals of Accounting I AND	(3)
ACT	102	Fundamentals of Accounting II	(3)
BAS	160	Introductions to Business	3
BAS	120	Personal Finance	3
		Total Credits	**9-12**

General Business - 5202013169

(Offered at ASC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

Available Completely Online

Required:

BAS	160	Introduction to Business	3
CIT	105	Introduction to Computers OR	3
OST	105	Introduction to Information Systems	(3)
ACT	101	Fundamentals of Accounting I OR	3
ACC	201	Financial Accounting	(3)
ECO		Any Economics Course	3
		Total Credits	**12**

Hospitality Management - 5202013179

(Offered at BSC, HZC, SEC, SMC,WKC)

Required:

HOS	100	Introduction to Hospitality	3
CUL	100	Culinary Arts Profession	2
HOS	282	Tourism Marketing	3

Choose 9 hours from the following Technical Courses. Students may select other courses (HOS or CUL) as approved by the Business Administration Systems Program Coordinator.

BAS	200	Small Business Management	3
BAS	274	Human Resource Management	3
COE	199	Cooperative Education: Business Administration OR	1-3
BAS	280	Business Internship OR	(1-4)
BAS	290	Management, Ethics & Society	(1-3)
CUL	200	Sanitation & Safety	2
CUL	105	Applied Fundamentals of the Culinary Arts Profession	2
CUL	280	Cost & Control	3
HOS	160	Security for the Hospitality Industry	3
HOS	200	Cultural Heritage Tourism	3
HOS	210	Front Office Operations & Management	3
HOS	220	Housekeeping & Maintenance Management	3
CUL	270	Human Relations Management	3
		Total Credits	**17**

Human Resource Management - 5202013359

(Offered at ASC, BSC, ELC, GTW, HEC, MDC, MYC, SEC, SKY,WKC)

Required:

BAS	274	Human Resource Management	3
BAS	287	Supervisory Management	3
ACT	196	Payroll Accounting	3

Choose 9 hours from the following Technical Courses. Students may select other courses as approved by the Business Administration Systems Program Coordinator.

BAS	280	Business Internship OR	1-3
COE	199	Cooperative Education	(1-3)
ISX	100	Industrial Safety	3
BAS	284	Applied Management Skills	3
BAS	288	Person & Organizational Leadership	3
BAS	290	Management, Ethics & Society	3
BAS	299	Selected Topics in Management: (Track Topic)	.3
OST	275	Office Management	1-3
QMS	101	Introduction to Quality Systems	3
QMS	201	Customer Service Improvement Skills	3
QMS	202	Performance Management	3
PSY	180	Human Relations	3
IFM	111	Client-Side Informatics Software	3
IFM	128	Principles of Informatics	3
IFM	130	Business Data Communications	3
IFM	211	Collaboration Software	3
IFM	215	Information System Analysis	3
IFM	225	Advanced Informatics	3
IFM	235	Information Systems and Business Intelligence	3
		Total Credits	**18**

Industrial Supervisor - 5202013339

(Offered at ASC, HPC, SEC)

General Education:

ENG	101	Writing I	3
MAT	150	College Algebra	3
COM	181	Basic Public Speaking OR	3
COM	252	Interpersonal Communications OR	(3)
PSY	110	General Psychology	(3)

Required Technical:

BAS	287	Supervisory Management	3
INDT	120	Industrial Safety	3
INDT	233	Statistical Process Control	3
BAS	274	Human Resource Management	3
CIT	105	Introduction to Computers OR	3
OST	105	Introduction to Information Systems	(3)

Choose 6 hours from the approved Technical Courses:

BAS	160	Introduction to Business	3
INDT	220	Introduction to Industrial Psychology	3
ENV	101	Fundamentals of Environment Science	1
ENV	132	Environment Management	2
INDT	250	Team Dynamics & Problem – Solving	3
		Total Credits	**30**

Informatics Fundamentals - 5202013449

(Offered at HEC, MYC, SEC, SMC)

IFM	128	Principles of Informatics	3
CIT	170	Database Design Fundamentals	3
IFM	215	Information Systems Analysis	3
		Total Credits	**9**

Informatics Business Analyst – 5202013459

(Offered at HEC, MYC, SEC, SMC)

Required: Choose 6 hours from the following Courses.

IFM	130	Business Data Communications	3
IFM	235	Information Systems and Business Intelligence	3
IFM	111	Client-Side Informatics Software	3
		Total Credits	**6**

Leadership - 5202013199

(Offered at ASC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

Available Completely Online

Required:

BAS	288	Personal and Organizational Leadership	3
BAS	160	Introduction to Business	3
ECO		Any Economics Course	3
COM	181	Basic Public Speaking OR	3
COM	252	Introduction to Interpersonal Communication	(3)
		Total Credits	**12**

Management - 5202013209

(Offered at ASC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

Available Completely Online

Required:

BAS	283	Principles of Management	3
BAS	212	Introduction to Financial Management OR	3
		Second Quantitative Reasoning Course from General Education not duplicative of core math	(3)
BAS	284	Applied Management Skills	3

Choose 6 hours from the following Technical Courses. Students may select other courses as approved by the Business Administration Systems Program Coordinator:

BAS	200	Small Business Management	3
BAS	256	International Business	3
BAS	260	Professional Development & Protocol	2
BAS	274	Human Resource Management	3
BAS	285	Problems in Marketing & Management	3
BAS	287	Supervisory Management	3
BAS	288	Personal & Organizational Leadership	3
BAS	289	Operations Management	3
BAS	290	Management, Ethics & Society	3
BAS	291	Retail Management	3
BAS	299	Selected Topics Management: (Track Topic)	1-3
OST	275	Office Management	3
QMS	101	Introduction to Quality Systems	3
QMS	202	Performance Management	3
		Total Credit Hours	**15**

Office Systems - 5202013219

(Offered at BSC, GTW, HEC, HZC, MDC, SEC, SMC,WKC)

Required:

OST	110	Document Formatting and Word Processing	3
OST	210	Advanced Word Processing Applications	3
OST	215	Office Procedures	3
OST	220	Administrative Office Simulations	3

Choose 6 hours from the following Technical Courses. Students may select other courses as approved by the Business Administration Systems Program Coordinator.

OST	150	Transcription and Office Technology	3
OST	160	Records and Database Management	3
OST	216	Selected Topics in Office Systems: (Topic)	1-3
OST	235	Business Communications Technology	3
OST	295	Office Systems Technology Internship OR	1-3
COE	199	Cooperative Education: (Business Technology) OR	(1-3)
BAS	280	Business Internship	(1-4)
OST	275	Office Management	3
		Total Credits	**18**

Operations Management - 5202013369

(Offered at BSC, GTW, HEC, HPC, MYC, SEC,WKC)

Required:

BAS	160	Introduction to Business	3
BAS	287	Supervisory Management OR	3
BAS	288	Personal & Organizational Leadership OR	(3)
QMS	101	Introduction to Quality Systems	(3)
BAS	289	Operations Management OR	3
MFG	256	Production Management	(3)
COM	181	Basic Public Speaking OR	3
COM	252	Introduction to Interpersonal Skills	(3)
		Total Credits	**12**

Payroll Accounting Specialist - 5202013439

(Offered at ASC, BSC, ELC, HEC, MDC, MYC, OWC, SEC, SKY,WKC)

Required:

ACC	201	Financial Accounting OR	3
ACT	101	Fundamentals of Accounting I AND	(3)
ACT	102	Fundamentals of Accounting II	(3)
ACT	196	Payroll Accounting	3
ACT	279	Computerized Accounting Systems	3
		Total Credits	**9-12**

Pre-Licensing Real Estate - 5202013239

(Offered at ASC, BLC, BSC, ELC, MDC, MYC, OWC, SEC, SMC,WKC)

Required:

REA	100	Real Estate Principles I	3

Choose 3 hours from the following Technical Courses. Students may select other courses as approved by the Business Administration Systems Program Coordinator.

REA	120	Real Estate Marketing	3
REA	200	Real Estate Principles II	3
REA	225	Real Estate Finance	3
REA	230	Real Estate Law	3
		Total Credits	**6**

Real Estate Pre-Brokerage Management- 5202013489

(Offered at BLC, OWC, SEC)

REA	100	Real Estate Principles I	3
REA	220	Brokerage Management	3
REA	230	Real Estate Law	3
		Subtotal	**9**

Choose 9 hours from the following list:

REA	120	Real Estate Marketing	3
REA	121	Appraising	3
REA	122	Construction and Blueprints	3
REA	201	Property Management	3
REA	202	Real Estate Investments I	3
REA	225	Real Estate Finance	3
		Subtotal	**9**

Additional General Education Requirements

Choose 6 hours from the following:

PSY	110	General Psychology	3
ECO	201	Principles of Microeconomics	3
ACC	201	Financial Accounting	3
CIT	130	Productivity Software OR	3
OST	240	Software Integration	(3)
		Subtotal	**6**
		Total Credits	**24**

Residential Real Estate - 5202013249

(Offered at BSC, ELC, MDC, MYC, OWC, SEC, SMC,WKC)

Required:

REA	100	Real Estate Principles I	3
REA	120	Real Estate Marketing	3

Choose 6 hours from the following Approved Technical Courses.

REA	121	Appraising	3
REA	122	Construction and Blueprints	3
REA	200	Real Estate Principles II	3
REA	201	Property Management	3
REA	225	Real Estate Finance	3
REA	230	Real Estate Law	3
		Total Credits	**12**

Sales - 5202013259

(Offered at BSC, ELC, GTW, MYC, OWC, SEC, SMC)

Required:

BAS	155	Personal Selling	3
COM	181	Basic Public Speaking OR	3
COM	252	Introduction to Interpersonal Communication	(3)

Choose 6 hours from the following Technical Courses. Students may select other courses as approved by the Business Administration Systems Program Coordinator.

BAS	291	Retail Management	3
CIT	155	Web Page Development	3
QMS	201	Customer Service Improvement Skills	3
BAS	260	Professional Development and Protocol	2
COE	199	Cooperative Education OR	1-3
BAS	280	Business Internship	(1-4)
		Total Credits	**12**

Small Business Management - 5202013269

(Offered at ASC, BSC, ELC, HEC, HZC, JFC, MDC, MYC, OWC, SEC, SMC,WKC)
Available Completely Online

Required:

BAS	160	Introduction to Business OR	3
BAS	170	Entrepreneurship	(3)
BAS	200	Small Business Management	3
BAS	212	Introduction to Financial Management OR	3
		Second Quantitative Reasoning Course from General Education	(3)
BAS	282	Principles of Marketing	3
ACC	201	Financial Accounting OR	3
ACT	177	Entrepreneurial Accounting OR	(3)
ACT	101	Fundamentals of Accounting I AND	(3)
ACT	102	Fundamentals of Accounting II	(3)
BAS	287	Supervisory Management OR	3
BAS	288	Personal & Organization Leadership	(3)
		Total Credits	**18-21**

Supervisory Management - 5202013279

(Offered at ASC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)
Available Completely Online

Required:

CIT	105	Introduction to Computers OR	3
OST	105	Introduction to Information Systems	(3)
OST	235	Business Communications Technology	3
BAS	160	Introduction to Business	3
BAS	287	Supervisory Management	3
BAS	274	Human Resource Management	3

Choose 6 hours from the following Technical Courses. Students may select other courses as approved by the Business Administration Systems Program Coordinator.

BAS	283	Principles of Management	3
BAS	288	Personal and Organizational Leadership	3
BAS	290	Management, Ethics & Society	3
OST	275	Office Management	3
QMS	101	Introduction to Quality Systems	3
QMS	201	Customer Service Improvement Skills	3
		Total Credits	**21**

Team Leadership - 5202013309

(Offered at BSC, ELC, HEC, JFC, MDC, MYC, OWC, SEC, SKY,WKC)
Available Completely Online

Required Courses:

OST	105	Introduction to Information Systems OR	3
CIT	105	Introduction to Computers	(3)
OST	235	Business Communication Technology OR	3
COM	181	Basic Public Speaking OR	(3)
COM	252	Interpersonal Communications	(3)
BAS	287	Supervisory Management	3
BAS	288	Personal & Organizational Leadership	3

Choose 3 hours from the following Technical Courses. Students may select other courses as approved by the Business Administration Systems Program Coordinator

QMS	101	Introduction to Quality Systems	3
QMS	201	Customer Service Improvement Skills	3
QMS	202	Performance Management	3
BAS	160	Introduction to Business	3
BAS	274	Human Resource Management	3
BAS	290	Management, Ethics & Society	3
		Total Credits	**18**

Medical Information Technology

Medical Information Technology graduates prepare medical records and reports, maintain paper and electronic files, order supplies, perform accounting procedures, work with medical insurance and coding, and receive patients in a variety of health care settings. Some of the degree tracks include Medical Administrative Assistant, Medical Insurance Coder, and Electronic Medical Records. Students enrolled in the degree or diploma programs are required to do an internship or capstone course.

Progression in the Medical Information Technology program is contingent upon achievement of a grade of "C" or better in each course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

Associate in Applied Science

Medical Information Technology - 5107167019

(Offered at ASC, BLC, BSC, ELC, HPC, HZC, MDC, MYC, OWC, SKY, SMC,WKC)

General Education:

MAT	105	Business Math OR	3
MAT	110	Applied Mathematics OR	(3)
MAT	150	College Algebra OR	(3)
		A Higher Level Quantitative Reasoning Course	(3)
ENG	101	Writing I	3
BIO	135	Basic Anatomy and Physiology with Laboratory**	4
		Oral Communications	3
		Heritage/Humanities	3
		Social/Behavioral Sciences	3
		Subtotal	**19**

**Students can fulfill the Biology requirement with both BIO 137 and BIO 139.

Technical Core:

OST	105	Introduction to Information Systems OR	3
CIT	105	Introduction to Computers	(3)
OST	110	Document Formatting and Word Processing	3
MIT	230	Medical Information Management	3
OST	240	Software Integration OR	3
CIT	130	Productivity Software	(3)
MIT	103	Medical Office Terminology OR	3
AHS	115	Medical Terminology OR	(3)
CLA	131	Medical Terminology from Greek and Latin	(3)
MIT	104	Medical Insurance	3
MIT	217	Medical Office Procedures	3
MIT	224	Medical Practice Management	3
MIT	228	Electronic Medical Records	3
MIT	295	Medical Information Technology Capstone	3
		Subtotal	**30**

Medical Administrative Track - 510716705

(Offered at ASC, BLC, BSC, ELC, HZC, MDC, MYC, OWC, SKY, SMC,WKC)
Available Completely Online

ACT	101	Fundamentals of Accounting I OR	3
ACC	201	Financial Accounting I	(3)
OST	225	Introduction to Desktop Publishing	3
OST	235	Business Communications Technology	3
OST	210	Advanced Word Processing Application	3
		Course Approved by Program Coordinator	3
		Subtotal	**15**
		Total	**64**

Medical Coding Track - 510716706

(Offered at ASC, BLC, BSC, ELC, HPC, HZC, MDC, MYC, OWC, SMC,WKC)

Available Completely Online

ACT	101	Fundamentals of Accounting I OR	3
ACC	201	Financial Accounting I	(3)
MIT	204	Medical Coding	3
MIT	205	Advanced Medical Coding	3
OST	235	Business Communication Technology	3
		Course Approved by Program Coordinator	3
		Subtotal	**15**
		Total	**64**

Electronic Medical Records Track - 510716707

(Offered at ASC, BLC, BSC, ELC, HPC, HZC, MDC, MYC, OWC, SMC,WKC)

Available Completely Online

ACT	101	Fundamentals of Accounting I OR	3
ACC	201	Financial Accounting I	(3)
OST	210	Advanced Word Processing Application	3
OST	235	Business Communications Technology	3
		Courses Approved by Program Coordinator	6
		Subtotal	**15**
		Total	**64**

Medical Office Management Track – 510716709

(Offered at ASC, BLC, BSC, ELC, HPC, MDC, MYC, OWC, SKY, SMC,WKC)

ACT	101	Fundamentals of Accounting I OR	3
ACC	201	Financial Accounting I	(3)
OST	235	Business Communications Technology	3
BAS	160	Introduction to Business	3
OST	275	Office Management	3
		Courses Approved by Program Coordinator	3
		Subtotal	**15**
		Total	**64**

Medical Transcription Track - 510716708

(Offered at BLC, BSC, ELC, HZC, MDC, MYC, OWC, SMC,WKC)

Available Completely Online

MIT	106	Introduction to Medical Transcription	3
MIT	206	Medical Transcription	3
OST	210	Advanced Word Processing Application	3
OST	235	Business Communications Technology	3
		Course Approved by Program Coordinator	3
		Subtotal	**15**
		Total	**64**

Diplomas

Medical Administrative Assistant - 5107164019

(Offered at ASC, BLC, BSC, ELC, HZC, JFC, MDC, MYC, SKY, SMC,WKC)

Available Completely Online

General Education/Applied Academics

BIO	135	Basic Anatomy and Physiology with Laboratory**	4
OST	108	Editing Skills for Office Professionals OR	3
ENG	101	Writing I	(3)
		Subtotal	**7**

**Students can fulfill the Biology requirement with both BIO 137 and BIO 139.

Technical or Support Courses

ACT	101	Fundamentals of Accounting I OR	3
ACC	201	Financial Accounting I	(3)
OST	110	Document Formatting and Word Processing	3
OST	213	Business Calculation for Office Professionals OR	3
MAT	105	Business Mathematics OR	(3)
		Higher Quantitative Reasoning course	(3)
OST	235	Business Communications Technology	3
MIT	230	Medical Information Management	3
OST	210	Advanced Word Processing Application	3
OST	240	Software Integration OR	3
CIT	130	Productivity Software	(3)
MIT	103	Medical Office Terminology OR	3
AHS	115	Medical Terminology OR	(3)
CLA	131	Medical Terminology from Greek & Latin	(3)
MIT	295	Medical Information Technology Capstone	3
MIT	104	Medical Insurance	3
MIT	217	Medical Office Procedures	3
MIT	228	Electronic Medical Records	3
OST	105	Introduction to Information Systems OR	3
CIT	105	Introduction to Computers	(3)
		Course Approved by Program Coordinator	3
		Subtotal	**42**
		Total	**49**

Medical Records Specialist - 5107164069

(Offered at ASC, BLC, BSC, ELC, HPC, HZC, JFC, MDC, MYC, SMC,WKC)

Available Completely Online

General Education/Applied Academics

BIO	135	Basic Anatomy and Physiology with Laboratory**	4
OST	108	Editing Skills for Office Professional OR	3
ENG	101	Writing I	(3)
		Subtotal	**7**

**Students can fulfill the Biology requirement with both BIO 137 and BIO 139.

Technical or Support Courses

OST	105	Introduction to Information Systems OR	3
CIT	105	Introduction to Computers	(3)
OST	110	Document Formatting and Word Processing	3
OST	235	Business Communications Technology	3
OST	210	Advanced Word Processing Application	3
OST	240	Software Integration OR	3
CIT	130	Productivity Software	(3)
MIT	103	Medical Office Terminology OR	3
AHS	115	Medical Terminology OR	(3)
CLA	131	Medical Terminology from Greek & Latin	(3)
MIT	295	Medical Information Technology Capstone	3
MIT	230	Medical Information Management	3
MIT	217	Medical Office Procedures	3
MIT	228	Electronic Medical Records	3
		Subtotal	**30**
		Total	**37**

Certificates

Medical Unit Coordinator - 5107163019

(Offered at ASC, BLC, BSC, ELC, HPC, HZC, MDC, MYC, OWC, SEC, SKY, SMC, WKC)

Available Completely Online

OST	105	Introduction to Information Systems OR	3
CIT	105	Introduction to Computers	(3)
BIO	135	Basic Anatomy and Physiology with Laboratory**	4
OST	108	Editing Skills for Office Professionals OR	3
ENG	101	Writing I	(3)
OST	110	Document Formatting and Word Processing	3
MIT	230	Medical Information Management	3
MIT	103	Medical Office Terminology OR	3
AHS	115	Medical Terminology OR	(3)
CLA	131	Medical Terminology from Greek & Latin	(3)
MIT	104	Medical Insurance	3
MIT	217	Medical Office Procedures	3
MIT	224	Medical Practice Management	3
MIT	228	Electronic Medical Records	3
		Total	**31**

**Students can fulfill the Biology requirement with both BIO 137 and BIO 139.

Hospital Admissions Specialist - 5107163029

(Offered at ASC, BLC, BSC, ELC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

Available Completely Online

OST	105	Introduction to Information Systems OR	3
CIT	105	Introduction to Computers	(3)
OST	108	Editing Skills for Office Professionals OR	3
ENG	101	Writing I	(3)
OST	110	Document Formatting and Word Processing	3
OST	235	Business Communications Technology	3
MIT	230	Medical Information Management	3
MIT	103	Medical Office Terminology OR	3
AHS	115	Medical Terminology OR	(3)
CLA	131	Medical Terminology from Greek & Latin	(3)
MIT	104	Medical Insurance	3
MIT	217	Medical Office Procedures	3
MIT	224	Medical Practice Management	3
MIT	228	Electronic Medical Records	3
		Total	**30**

Medical Receptionist - 5107163110

(Offered at ASC, BLC, BSC, ELC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

Available Completely Online

OST	105	Introduction to Information Systems OR	3
CIT	105	Introduction to Computers	(3)
OST	110	Document Formatting and Word Processing	3
MIT	230	Medical Information Management	3
MIT	103	Medical Office Terminology OR	3
AHS	115	Medical Terminology OR	(3)
CLA	131	Medical Terminology from Greek & Latin	(3)
MIT	217	Medical Office Procedures	3
		Total	**15**

Medical Coding - 5107163079

(Offered by ASC, BLC, BSC, ELC, HZC, HPC, MDC, MYC, OWC, SEC, SKY, SMC, WKC)

OST	110	Document Formatting and Word Processing	3
BIO	135	Basic Anatomy and Physiology with Lab**	4
MIT	103	Medical Office Terminology OR	3
AHS	115	Medical Terminology OR	(3)
CLA	131	Medical Terminology from Greek & Latin	(3)
MIT	104	Medical Insurance	3
MIT	204	Medical Coding	3
MIT	205	Advanced Medical Coding	3
		Course approved by the Program Coordinator	3
		Total	**22**

**Students can fulfill the Biology requirement with both BIO 137 and BIO 139.

Medical Transcriptionist – 5107163089

(Offered by BLC, BSC, ELC, HZC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

OST	108	Editing Skills for Office Professionals OR	3
ENG	101	Writing I	(3)
OST	110	Document Formatting and Word Processing	3
OST	210	Advanced Word Processing Applications	3
MIT	103	Medical Office Terminology OR	3
AHS	115	Medical Terminology OR	(3)
CLA	131	Medical Terminology from Greek & Latin	(3)
MIT	106	Introduction to Medical Transcription	3
MIT	206	Medical Transcription	3
MIT	217	Medical Office Procedures	3
		Course Approved by Program Coordinator	3
		Total	**24**

Electronic Health Records Specialist – 5107163069

(Offered by ASC, BSC, BLC, ELC, HZC, MDC, HPC, OWC, SKY, SMC,WKC)

MIT	103	Medical Office Terminology OR	3
AHS	115	Medical Terminology OR	(3)
CLA	131	Medical Terminology from Greek & Latin	(3)
MIT	104	Medical Insurance	3
OST	110	Document Formatting and Word Processing	3
MIT	217	Medical Office Procedures	3
MIT	224	Medical Practice Management	3
MIT	228	Electronic Medical Records	3
MIT	230	Medical Information Management	3
OST	240	Software Integration OR	3
CIT	130	Productivity Software	(3)
OST	105	Introduction to Information Systems OR	3
CIT	105	Introduction to Computers	(3)
		Course Approved by Program Coordinator	1-3
		Total	**28-30**

Medical Scribe – 5107163099

(Offered by BSC, BLC, ELC, HZC, JFC, MDC, SKY, SMC)

OST	110	Document Formatting and Word Processing	3
BIO	135	Basic Anatomy and Physiology with Lab**	4
MIT	103	Medical Office Terminology OR	3
AHS	115	Medical Terminology OR	(3)
CLA	131	Medical Terminology from Greek & Latin OR	(3)
OST	108	Editing Skills for Office Professionals OR	3
ENG	101	Writing I	(3)
MIT	217	Medical Office Procedures	3
MIT	228	Electronic Medical Records	3
MIT	106	Introduction to Medical Transcription	3
MIT	230	Medical Information Management	3
OST	105	Introduction to Information Systems OR	3
CIT	105	Introduction to Computers	(3)
		Total	**28**

**Students can fulfill the Biology requirement with both BIO 137 and BIO 139.

Supply Chain Management

The Supply Chain Management AAS degree incorporates knowledge of the field of logistics, supply chain management, quality management, lean concepts and application, business and operations management, critical communication skills, and digital literacy required for successful employment in the logistics industry. The program will prepare students to perform functions in the modern logistics and supply chain management environment as well as give the preparation to obtain two national industry credentials (CLA and CLT) as a result.

The Supply Chain Specialist Certificate program prepares students for skilled entry-level positions in the field of Logistics. Graduates will also obtain two national industry credentials (CLA and CLT) through successful completion of coursework and a passing score on the respective tests.

The Logistics Quality Technician Certificate program prepares students with quality management knowledge and strategic concepts of planning as a proactive catalyst for organizational and quality improvement in the logistics industry. Graduates will also obtain two national industry credentials (CLA and CLT) through successful completion of coursework and a passing score on the respective tests.

The Logistics Operations Certificate program provides students with knowledge in business, operations, and project management leading to a variety of positions in the logistics industry. Graduates will also obtain two national industry credentials (CLA and CLT) through successful completion of coursework and a passing score on the respective tests.

Associate in Applied Science

Supply Chain Management – 5202037029

(Offered at GTW)

General Education

ENG	101	Writing I	3
COM	181	Basic Public Speaking OR	3
COM	252	Introduction to Interpersonal Communications	(3)
ECO	101	Contemporary Economic Issues OR	3
ECO	201	Principles of Microeconomics OR	(3)
ECO	201	Principles of Microeconomics	(3)
MAT	110	Applied Mathematics or Higher Quantitative Reasoning	3
		Natural Sciences Course	3
		Heritage/Humanities	3
		Subtotal	**18**

Technical Courses

CIT	105	Introduction to Computers	3
OST	235	Business Communications	3
BAS	160	Introduction to Business	3
BAS	256	International Business	3
BAS	288	Personal and Organization Leadership	3
BAS	289	Operations Management	3
LOM	100	Introduction to Logistics Management	3
LOM	101	Transportation	3
LOM	102	Supply Chain Management	3
LOM	202	Applied Supply Chain Management	3
LOM	210	Lean for Logistics	3
QMS	101	Introduction to Quality Systems	3
QMS	201	Customer Improvement Skills	3
QMS	212	Project Management OR	3
MGT	258	Project Management OR	(3)
QMS	251	Strategic Quality Planning	(3)
BAS	280	Business Internship OR	3
COE	199	Cooperative Education	(0-6)
		Subtotal	**42-48**
		Total Credits	**60-66**

Certificate

Supply Chain Specialist – 5202033059

(Offered at GTW)

CIT	105	Introduction to Computers	3
LOM	100	Introduction to Logistics Management	3
LOM	102	Supply Chain Management	3
LOM	210	Lean for Logistics	3
OST	235	Business Communications OR	3
COM	252	Interpersonal Communications	(3)
		Total Credits	**15**

Logistics Quality Technician – 5202033069

(Offered at GTW)

CIT	105	Introduction to Computers	3
LOM	100	Introduction to Logistics Management	3
LOM	102	Supply Chain Management	3
LOM	210	Lean for Logistics	3
QMS	101	Introduction to Quality Systems	3
QMS	251	Strategic Quality Planning	3
OST	235	Business Communications OR	3
COM	252	Interpersonal Communications	(3)
		Total Credits	**21**

Logistics Operations – 5202033079

(Offered at GTW)

CIT	105	Introduction to Computers	3
LOM	100	Introduction to Logistics Management	3
LOM	102	Supply Chain Management	3
LOM	210	Lean for Logistics	3
BAS	289	Operations Management	3
QMS	212	Project Management OR	3
MGT	258	Project Management	(3)
OST	235	Business Communications OR	3
COM	252	Interpersonal Communications	(3)
		Total Credits	**21**

Business Communication

The certificate in business communication will prepare students for a career in the rapidly evolving and expanding community of global enterprise. Students will learn both theoretical and applied lessons concerning effective management, team building, evaluation, message construction, effective listening, and standards for establishing mentorships through networking and workplace integration and socialization. They will complete a 5 course, 15 credit hour sequence with 2 courses selected from among class options in business and 3 courses selected from among class options in communication. There is no definitive time frame for a student to complete the certificate and they may choose to incorporate it as part of their broader degree attainment.

Certificate

Business Communication – 5202013469

(Offered at ASC, BSC, OWC, SEC)

Complete 2 (two) course from the list below.

BAS	160	Introduction to Business	3
BAS	274	Human Resource Management	3
BAS	282	Principles of Marketing	3
BAS	283	Principles of Management	3
BAS	287	Supervisory Management	3
		Subtotal	**6**

Complete 3 (three) course from the list below.

COM	181	Basic Public Speaking	3
COM	252	Introduction to Interpersonal Communication	3
COM	254	Introduction to Intercultural Communication	3
COM	281	Communication in Small Groups	3
COM	287	Persuasive Speaking	3
		Subtotal	**9**
		Total Credit Hours	**15**

Business Foundations

The Business Foundations certificate incorporates foundational knowledge of finance, quality systems, and external environmental factors that affect businesses today. The certificate will prepare students to perform functions in an integrated business environment and better understand organizational strategies.

Certificate

Business Foundations – 5201013029

(Offered at ASC, BSC, HZC, GTW, SEC)

QMS	101	Introduction to Quality Systems	3
ACC	201	Financial Accounting OR	3
ACT	101	Fundamentals of Accounting I AND	(3)
ACT	102	Fundamentals of Accounting II	(3)
ECO	201	Principles of Microeconomics OR	3
ECO	101	Contemporary Economic Issues OR	(3)
ECO	202	Principles of Macroeconomics	(3)
		Technical Courses*	9
		Total Credit Hours	**18-21**

Select 9 (nine) credit hours from the following technical courses*:

BAS	267	Introduction to Business Law	3
BAS	290	Management, Ethics & Society**	3
BAS	288	Personal & Organizational Leadership	3
QMS	240	Statistics for Quality I***	3
QMS	212	Project Management	3

**BAS 290 pre-requisite is BAS 283 or Consent of Instructor. BAS 283 pre-requisite is BAS 160 or Consent of Instructor.

***QMS 240 pre-requisite is MAT 150.

Certified Medical Technician

The program bundles the current classes of NAA100, PHB152, PHB170 and CPR100. Once all of these classes are completed successfully the graduate will be eligible to receive the certified medical technician certificate. The program allows the graduate to either enter the healthcare field with a varied technical skill set and/or enter a healthcare program.

Certificates

Certified Medical Technician – 5108993039

(Offered at MDC, SMC)

CPR	100	CPR for Healthcare Professionals	1
NAA	100	Nursing Assistant Skills I	3
PHB	152	Phlebotomy: Clinical Experience	1
PHB	170	Applied Phlebotomy	3
		Total	**8**

Civil Engineering Technology

The Civil Engineering Technology program is an Associates of Applied Science program designed to offer students the training necessary to establish careers in civil engineering technology fields. Career options include materials testing, commercial, residential and highway surveying; highway construction management; construction management; construction estimation; construction documentation; construction site design and waste-water management.

The Civil Engineering Technology Program will focus on the field tasks and hands on aspects of construction.

Associate in Applied Science

Civil Engineering Technology - 1502017019

(Offered at BLC, BSC)

Required

ENG	101	Writing I*	3
ENG	102	Writing II*	3
CAD	100	Introduction to Computer-Aided Design OR	3
ACH	185	Computer-Aided Drafting I	(3)
		Heritage/Humanities*	3
MA	109	College Algebra*	3
		Oral Communications Course*	3
PHY	211	General Physics*	5
		Social/Behavioral Sciences Course*	3

Core

ACH	160	Building Materials and Construction I	3
ACH	225	Structures	3
CE	211	Surveying	4
CET	150	Civil Engineering Graphics	3
CET	200	Civil Engineering Materials	3
CET	210	Structural Analysis and Design	3
CET	220	Intermediate Surveying	4
CET	260	Hydrology and Drainage	3
MA	112	Trigonometry	2
		Elective	3
		Technical Electives	9
		Subtotal	**40**
		Total	**67**

Technical Electives**

ACH	100	Construction Documents I	3
ACH	150	Construction Documents II	3
ACH	161	Building Materials and Construction II	3
ACH	285	Computer-Aided Drafting II	3
ACH	290	Building Codes I	3
ACH	291	Construction Management	3
ACH	292	Building Codes II	3
ACH	294	Specification Writing	3
ACH	297	Estimating Techniques	3
ACH	298	Computer 3D Modeling	3
CAD	200	Intermediate Computer-Aided Design	4
CET	280	Highway Design	3
CET	295	Independent Problems	1-4
COE	199	Cooperative Education: CET	3
GIS	110	Spatial Data Analysis and Map Interpretation	3
GIS	120	Introduction to Geographic Information Systems	3
GIS	210	Advanced Topics in GIS	3
GLY	220	Principles of Physical Geology	4

* Satisfies General Education requirement for AAS degree

**Other course(s) approved by program coordinator

Community Dental Health Coordinator

This program is designed for Registered Dental Hygienists (RDHs) who are interested in working in community dental health as Community Dental Health Coordinators (CDHCs). A CDHC is a Community Health Worker (CHW) with a focused skill set pertaining to oral health. CDHCs provide oral health education, prevention intervention, and low level dental care while helping patients navigate the public health system in pursuit of oral health care.

Certificate

Community Dental Health Coordinator – 5122083009

CDH	110	Dental Health Communication Skills	3
CDH	115	Dental Health Coordination, Documentation, Reporting, and Finance	3
CDH	125	Dental Health Teaching and Learning Skills	2
CDH	220	Prevention of Periodontal Disease	3
CDH	245	Community Dental Health Coordinator Internship	6
		Total	**17**

Computer Aided Drafting and Design

A computer aided drafter and designer is a technical specialist with broad-based skills for architectural, civil, mechanical, and manufacturing fields. In this program, the students are taught manual drafting techniques, 2D and 3D CAD, and 3D printing. Specific skills taught include, but are not limited to, lettering, geometric construction, orthographic projections, dimensioning and tolerancing, and related technical processes. These skills are required to transform specifications and instructions of architects, designers, and engineers into complete and precise drawings. The drafter is a skilled technician with a thorough understanding of the graphic language and is an indispensable contributor to the engineering design team.

Progression in the Computer Aided Drafting and Design program is contingent upon achievement of a grade of "C" or greater in each technical and mathematics course with maintenance of a 2.0 cumulative grade point average or above (on a 4 scale).

Associate in Applied Science

Computer Aided Drafting and Design - 1513017029

(Offered at BLC, BSC, ELC)

General Education:

ENG	101	Writing I	3
		Quantitative Reasoning (MAT 105 excluded)	3
		Natural Sciences	3
		Social/Behavioral Sciences	3
		Heritage/Humanities	3
		Oral Communications	3
		Subtotal	**18**

Technical Core:

		Digital Literacy course OR demonstrated competency	0-3
CAD	100	Introduction to Computer Aided Design OR	3
CAD	103	CAD Fundamentals	(4)
CAD	102	Drafting Fundamentals	4
CAD	112	Engineering Graphics	4
CAD	200	Intermediate Computer Aided Design	4
CAD	201	Parametric Modeling	4
		Technical Electives (Choose from the Technical Electives List)	23
		Subtotal	**42-46**
		Total Credits	**60-64**

NOTE: Computer/Digital Literacy must be demonstrated either by competency exam or by completing a computer /digital literacy course.

Technical Electives: (This list is not all inclusive, other courses may be taken as approved by the program coordinator such as courses with prefix ACH, BRX, CAR, SMT, and PLW.)

CAD	108	Introduction to Surveying	3
CAD	120	Introduction to Architecture	4
CAD	150	Programming in CAD	4
CAD	212	Industrial Drafting Processes	4
CAD	216	Building Information Modeling	4
CAD	222	Mechanical Design	4
CAD	220	Architectural Design	4
CAD	230	Construction Techniques	4
CAD	240	Advanced Dimensioning and Measurement	4
CAD	252	Commercial Detailing	4
CAD	262	Working Drawings	4
CAD	292	Industrial Applications	4
CAD	293	Special Problems	1-4
DPT	100	Introduction to 3D Printing Technology	3

Diploma

Computer Aided Drafting and Design - 1513014049

(Offered at ASC, BLC, BSC, ELC, HZC, HPC, JFC, MYC, SEC,WKC)

Available Completely Online

General Education:

Area 1:		Written Communication, Oral Communications or Humanities/Heritage	3
Area 2:		Quantitative Reasoning (MAT 105 excluded)	3
		Subtotal	**6**

Technical Core:

		Digital Literacy course or demonstrated competency	0-3
CAD	100	Introduction to Computer Aided Design OR	3
CAD	103	CAD Fundamentals	(4)
CAD	102	Drafting Fundamentals	4
CAD	112	Engineering Graphics	4
CAD	200	Intermediate Computer Aided Design	4
CAD	201	Parametric Modeling	4
		Technical Electives (Choose from the Technical Elective List)	19
		Subtotal	**38-42**
		Total Credit	**44-48**

NOTE: Computer/Digital Literacy must be demonstrated either by competency exam or by completing a computer/digital literacy course.

Technical Electives: (This list is not all inclusive, other courses may be taken as approved by the program coordinator such as courses with prefix ACH, BRX, CAR, SMT, and PLW.)

CAD	108	Introduction to Surveying	3
CAD	120	Introduction to Architecture	4
CAD	130	Descriptive Geometry	4
CAD	150	Programming in CAD	4
CAD	212	Industrial Drafting Processes	4
CAD	216	Building Information Modeling	4
CAD	222	Mechanical Design	4
CAD	220	Architectural Design	4
CAD	230	Construction Techniques	4
CAD	240	Advanced Dimensioning and Measurement	4
CAD	252	Commercial Detailing	4
CAD	262	Working Drawings	4
CAD	292	Industrial Applications	4
CAD	293	Special Problems	1-4
CAD	298	Practicum	1-3
CAD	299	Cooperative Experience	1-3
DPT	100	Introduction to 3D Printing Technology	3

Certificates

Computer Assisted Drafter - 1513013059

(Offered at ASC, BLC, BSC, ELC, HPC, HZC, JFC, MYC, SEC,WKC)
Available Completely Online

General Education:

		Written Communication, Oral Communications, or Humanities/Heritage	3
		Quantitative Reasoning (MAT 105 excluded)	3
		Subtotal	**6**

Technical Core:

		Digital Literacy course OR demonstrated competency	0-3
CAD	100	Introduction to Computer Aided Design OR	3
CAD	103	CAD Fundamentals	(4)
CAD	102	Drafting Fundamentals	4
CAD	112	Engineering Graphics	4
CAD	200	Intermediate Computer Aided Design	4
CAD	201	Parametric Modeling	4
		Technical Elective	4
		Subtotal	**23-27**
		Total Credits	**29-33**

Detailer - 1513013089

(Offered at ASC, BLC, BSC, ELC, HPC, HZC, JFC, SEC,WKC)
Available Completely Online

General Education:

		Written Communication, Oral Communications, or Humanities/Heritage	3
		Quantitative Reasoning (MAT 105 excluded)	3
		Subtotal	**6**

Technical Core:

		Digital Literacy course OR demonstrated competency	0-3
CAD	100	Introduction to Computer Aided Design OR	3
CAD	103	CAD Fundamentals	(4)
CAD	102	Drafting Fundamentals	4
CAD	112	Engineering Graphics	4
CAD	200	Intermediate Computer Aided Design	4
		Technical Elective	4
		Subtotal	**19-23**
		Total Credits	**25-29**

Drafter Assistant – 1513013079

(Offered at ASC, BLC, BSC, ELC, HPC, HZC, JFC, MYC, SEC,WKC)
Available Completely Online

General Education:

		Written Communication, Oral Communications, or Humanities/Heritage	3
		Quantitative Reasoning (MAT 105 excluded)	3
		Subtotal	**6**
		Digital Literacy course OR demonstrated competency	0-3
CAD	100	Introduction to Computer Aided Design OR	3
CAD	103	CAD Fundamentals (Digital Literacy Course)	(4)
CAD	102	Drafting Fundamentals OR	4
CAD	112	Engineering Graphics	(4)
		Subtotal	**7-11**
		Total Credits	**13-17**

Civil Drafter - 1513013049

(Offered at ASC, BLC, BSC, HZC, SEC)

General Education:

		Quantitative Reasoning (MAT 105 excluded)	3
		Subtotal	**3**

Technical Core:

		Digital Literacy course OR demonstrated competency	0-3
CAD	100	Introduction to Computer Aided Design OR	3
CAD	103	CAD Fundamentals	(4)
CAD	102	Drafting Fundamentals	4
CAD	112	Engineering Graphics	4
		Subtotal	**11-15**

Surveying Core:

Choose 9-12 hours from the following courses:

CAD	108	Introduction to Surveying	3
CAD	130	Descriptive Geometry	4
SMT	110	Principles of Surveying	3
SMT	130	Land Surveying Graphics	3
SMT	160	Construction Surveying	3
SMT	210	Advanced Surveying Measurement	3
SMT	220	Surveying Lab	3
SMT	230	Land Boundary Location	3
SMT	250	Mine Surveying	3
		Subtotal	**9-12**
		Total Credits	**23-30**

3D Modeler – 1513013099

(Offered at BLC, ELC, HZC, JFC,WKC)

CAD	100	Introduction to Computer Aided Design OR	3
CAD	103	CAD Fundamentals	(4)
CAD	200	Intermediate CAD	4
CAD	201	Parametric Modeling	4
		Technical Electives	5-7
		Total Credits	**16-19**

Computer & Information Technologies

With tracks in Applications, Information Security, Internet Technologies, Network Administration, Networking Technologies, Programming, Computer Science, Video Game Design, and Data Center Technologies.

This program includes tracks in Applications, Information Security, Internet Technologies, Network Administration, Network Technologies, Programming, Computer Science, Video Game Design, and Data Center Technologies, with a core of courses common to all. The core includes a general education component essential to a collegiate education and a technical component giving students an introduction to information systems, computer applications, program development, system maintenance, networking, security, Internet technologies, database design, and collaborative system development. In addition to core courses, students take specialty courses for their selected track.

- Students graduating with a degree or certificate in Computer & Information Technologies may only use a course with a grade of "C" or higher (or a "Pass" for Pass/Fail courses) to fulfill a core or track graduation requirement.
- The Computer & Information Technologies department does not accept non-Gen Ed courses older than 5 years from returning or transfer students without consent from the local program coordinator.
- Students may not use one course to fulfill multiple requirements.

The **Applications track** emphasizes several aspects of application software. It includes such productivity applications as: word processing, spreadsheets, database management, presentation, geographic information systems, website development/maintenance, and help desk tracking systems. Completion of this track will prepare students to work with computer-based systems in business and industry.

Business Software Specialist - Designed to train students to operate a wide variety of software packages and to assist businesses in developing and maintain databases, producing financial statements, and developing applications using various software packages

Computer Support - Provides an in-depth knowledge of application software, computer system configurations, Help Desk Tools/Software, end-user documentation, user training, and other user support skills.

Geographic Information Systems - Provides students with practical GIS skills and a solid foundation for geographical manipulation through developing and implementing GIS Applications.

Software Support - Provides an in-depth knowledge of application software, computer system configurations, and data driven websites.

The **Information Security track** will provide a solid background in information security. Fundamentals of information security, offensive and defensive techniques, and security topics such as operating system security, network security design, or other security topics are covered. This track will help prepare students for entry-level positions of network security, auditing and penetration testing, firewall configuration, and computer crime investigation.

The **Internet Technologies track** prepares students to design, program, and maintain Internet-based services. With specializations in web programming and web server administration, this track will help prepare students for positions developing and maintaining interactive web sites.

The **Network Administration track** provides the concepts and skills needed to design, set-up, maintain and expand network and telecommunications systems. The curriculum provides specific training in Cisco, and/or Microsoft network systems. Upon completion of the track, the graduate will be qualified to take industry designed and recognized certification examinations. Employment opportunities include entry-level positions in installation and administration of local and wide area networks in medium to large businesses and organizations, and computer network administration positions in small businesses.

The **Network Technologies track** provides the concepts and skills needed to set up, maintain, and expand networked computer systems. This track requires sequences in Microsoft Windows, Cisco, and UNIX/Linux as well as courses providing deeper insight into Internet protocols and network security. Employment opportunities include entry-level positions in installation and administration of local area networks in medium to large organizations and as computer network administrators in small business.

The **Programming track** prepares students to design, develop, and maintain computer programs written in current and emerging programming languages. With tracks in Information Systems and Software Development, students successfully completing this track are prepared for entry-level positions in computer programming.

Information Systems - This track is designed with an emphasis on programming for a business environment. Students completing the Information Systems track study basic business concepts, one programming language at an advanced level, and two programming languages at an introductory level.

Software Development - This track emphasizes computer software development. Students completing the Software Development track study a minimum of two computer programming languages at an advanced level and additional programming language(s) at an introductory level. Flexibility within this track allows students to focus on a specific area of software development by means of the programming languages they choose to study (object-oriented programming, database programming, game development, etc.).

The **Computer Science track** prepares students interested in an advanced study of computer programming. The curriculum couples the study of programming with computer science concepts such as computational complexity, advanced data structures, and proof techniques. The curriculum may also be used to prepare students for entry into bachelor-level programs in computer science.

The **Video Game Design track** prepares students to design, develop, and market digital games and simulations. This track focuses on game development with an emphasis on game programming.

The **Data Center Technologies track** provides experience with Cloud computing areas such as virtualization, storage, security, high availability and adherence to standards in provisioning of computing resources that meet business and organizational needs. The curriculum may be used to prepare students for entry level positions in organizations that manage and design data centers.

Computer Technician Certificate

The Computer Technician Certificate offers students the opportunity to earn a credential demonstrating computer technician competencies. This certificate consists of the core skills that students need to achieve the industry A+ and Security+ certifications. In addition, this certificate will provide a way for professionals currently in the industry to update their technician skills and for new students to show progress in the CIT program.

CIT Fundamentals Certificate

The CIT Fundamentals Certificate offers students the opportunity to earn a credential demonstrating basic competency in the area of computers. The certificate consists of a natural progression of classes that are required for the Associate in Applied Science degree in Computer & Information Technologies. It gives those who are unable, or do not need, to complete a degree a way of demonstrating their level of computer proficiency.

Productivity Software Specialist Certificate

The Productivity Software Specialist Certificate offers students the opportunity to earn a credential demonstrating productivity software competencies. This certificate consists of the core skills that students need to effectively use various productivity software products. In addition, this certificate will provide a way for professionals currently in the industry to update their productivity software skills and for new students to show progress in the CIT program.

Computer Tech Basic Certificate

The Computer Tech Basic Certificate offers students the opportunity to earn a credential demonstrating basic competency in the area of computer information technology. The certificate consists of a natural progression of classes that are required for the Associate in Applied Science degree in Computer & Information Technologies. It gives those who are unable, or do not need, to complete a degree a way of demonstrating their level of computer proficiency. The Computer Tech Basic Certificate prepares students for the CompTIA A+ and Net+ certification exams which are recognized by the computer industry around the world.

Computer Support Technician Certificate

The Computer Support Technician Certificate offers students the opportunity to earn a credential demonstrating computer support technician competencies. The certificate consists of the core skills that students need for computer and end-user support. In addition, this certificate will provide a way for professionals currently in the industry to update their computer support technician skills and for new students to show progress in the CIT program.

Information Security Specialist Certificate

The Information Security Specialist Certificate offers students the opportunity to earn a credential demonstrating the fundamentals of information security. This certificate consists of the core skills that students need to effectively build and maintain information security systems. In addition, this certificate will provide a way for professionals currently in the industry to update their information security skills and for new students to show progress in the CIT program.

Microsoft Network Administrator Certificate

The Microsoft Network Administrator Certificate offers students the opportunity to earn a credential demonstrating the fundamentals of computer networking. This certificate consists of the core skills that students need to effectively build and maintain computer networks. In addition, this certificate will provide a way for professionals currently in the industry to update their computer networking skills and for new students to show progress in the CIT program.

CISCO Networking Associate Certificate

The CISCO Networking Associate Certificate offers students the opportunity to earn a credential demonstrating the fundamentals of computer networking. This certificate consists of the core skills that students need to effectively build and maintain computer networks. In addition, this certificate will provide a way for professionals currently in the industry to update their computer networking skills and for new students to show progress in the CIT program. The CISCO Networking Associate Certificate prepares students for the CCNA exam which is recognized by the computer industry around the world.

Network Technologies Specialist Certificate

The Network Technologies Specialist Certificate offers students the opportunity to earn a credential demonstrating network technology competencies. This certificate consists of specialized networking classes that students need to effectively configure and maintain networks using network technologies specialist skills. In addition, this certificate will provide a way for professionals currently in the industry to update their network technologies specialist skills.

Net+ Certificate

The Net+ Certificate offers students the opportunity to earn a credential demonstrating the fundamentals of computer networking. This certificate consists of the core skills that students need to effectively build and maintain computer networks. In addition, this certificate will provide a way for professionals currently in the industry to update their computer networking skills and for new students to show progress in the CIT program. The Net+ Certificate prepares students for the CompTia Net+ exam which is recognized by the computer industry around the world.

Security + Certificate

The Security+ Certificate offers students the opportunity to earn a credential demonstrating the fundamentals of information security. This certificate consists of the core skills that students need to effectively build and maintain information security systems. In addition, this certificate will provide a way for professionals currently in the industry to update their computer networking skills and for new students to show progress in the CIT program. The Security+ Certificate prepares students for the CompTia Security+ exam which is recognized by the computer industry around the world.

CISCO Networking Enhanced Certificate

The CISCO Networking Enhanced Certificate offers students the opportunity to earn a credential demonstrating the fundamentals of computer networking. This certificate consists of the core skills that students need to effectively build and maintain computer networks. In addition, this certificate will provide a way for professionals currently in the industry to update their computer networking skills and for new students to show progress in the CIT program. The CISCO Networking Associate Certificate prepares students for the CCNA and Net+ exams which are recognized by the computer industry around the world.

A+ Certificate

The A+ Certificate offers students the opportunity to earn a credential demonstrating basic competency in the area of computer hardware and software. The certificate consists of one course that prepares students for the CompTIA A+ certification exams which are recognized by the computer industry around the world. It gives those who are unable, or do not need, to complete a degree a way of demonstrating their level of proficiency.

Microsoft Enterprise Administrator Certificate

The Microsoft Enterprise Administrator certificate offers students the opportunity to earn a credential demonstrating skills in the administration and design of Microsoft enterprise networks. This certificate consists of the core skills that students need to effectively plan, build, and maintain a Microsoft network. In addition, this certificate will provide a way for professionals currently in the industry to update their Microsoft network administrator skills.

Programming Certificate

The Software Developer Certificate offers students the opportunity to earn a credential demonstrating programming competencies. This certificate consists of the core skills that students need to effectively develop programs using multiple computer languages. In addition, this certificate will provide a way for professionals currently in the industry to update their programming skills and for new students to show progress in the CIT program.

Web Programming Certificate

The Web Programming Certificate offers students the opportunity to earn a credential demonstrating web programming competencies. This certificate consists of the core skills that students need to effectively develop websites using web programming. In addition, this certificate will provide a way for professionals currently in the industry to update their web programming skills and for new students to show progress in the CIT program.

Web Administration Certificate

The Web Administration Certificate offers students the opportunity to earn a credential demonstrating web administration competencies. This certificate consists of the core skills that students need to effectively maintaining web sites through network and web server administration. In addition, this certificate will provide a way for professionals currently in the industry to update their web administration skills and for new students to show progress in the CIT program.

Social Media Specialist Certificate

The Social Media Specialist Certificate prepares students for careers as social media analyst to leverage social media tools to increase business awareness and presence.

Digital Forensics Certificate

The Digital Forensics Certificate offers students the opportunity to earn a credential demonstrating skills in digital forensics. Digital forensics covers the retrieval and investigation of material found in digital devices. Digital material refers to all methods of electronic data storage and transfer devices, including computers, laptops, cell phones, tablets, gaming consoles, and portable storage devices. The goal of digital forensics is to ensure the integrity of that digital material while thoroughly examining it. Digital forensics requires in-depth knowledge of the understanding of the legal as well as the technical aspects of cyber-crime. This certificate consists of the core skills that students need to demonstrate in basic digital forensic skills. It provides an introduction to information security and incident response, forensic preparation and data recovery and analysis. The goals of this certificate focus on the principles and techniques used to identify, search, seize and analyze digital media, and to conduct cyber investigations. In addition, this certificate will provide a way for professionals currently in the industry to update their digital forensic skills and for new students to show progress in the CIT program.

Mobile Apps Development Certificate

The Mobile Apps Development Certificate offers students the opportunity to earn a credential demonstrating mobile apps development competencies. This certificate consists of the core skills that students need to effectively develop mobile apps. It provides a way for professionals currently in the industry to update their mobile app development skills and for new students to show progress in the CIT program.

Informatics Programming Certificate

This certificate offers students the opportunity to earn a credential demonstrating informatics programming competencies. It consists of core abilities that students need to design well-structured databases and effectively develop secure applications using an object-oriented programming language to interface with databases.

Associate in Applied Science

Computer and Information Technologies - 1101017089

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

General Education

ENG	101	Writing I	3
MAT	126	Technical Algebra and Trigonometry (or higher)	3
		Social/Behavioral Science Course	3
		Heritage/Humanities Course	3
		Natural Sciences Course	3
		Subtotal	**15**

General Education for Computer Science Track

ENG	101	Writing I	3
MAT	174	Calculus I	4
		Social/Behavioral Science Course	3
		Heritage/Humanities Course	3
PHY	231	General University Physics	4
PHY	241	General University Physics Laboratory	1
		General Education (CS) Subtotal	**18**

Core Requirements

CIT	105	Introduction to Computers	3
CIT	111	Computer Hardware and Software	4
CIT	120	Computational Thinking	3
CIT	150	Internet Technologies OR	3
CIT	155	Web Page Development OR	(3)
CIT	157	Web Site Design and Production	(3)
CIT	170	Database Design Fundamentals	3
CIT	180	Security Fundamentals	3
		Approved Level I Networking Course	4
		Approved Level I Programming Language Course	3
CIT	291	CIT Capstone	3
		Technical Core Subtotal	**29**

Applications Track – 110101711

(Offered at ASC, BLC, BSC, HZC, HEC, HPC, JFC, MDC, MYC, OWC, SEC,WKC)

CIT	130	Productivity Software	3
		Approved Business or Management Course	3
		Approved CIT Technical Course	3
		Completion of an Applications Track Course Sequences in Business	
		Software Specialist or Computer Support or Geographic Information Systems or Software Support	12
		Track Subtotal	**21**
		Total	**65**

Applications Track Course Sequences:

Business Software Specialist

CIT	234	Advanced Productivity Software	3
CIT	236	Advanced Data Organization	3
CIT	171	SQL I	3
		Approved Business or Management Course	3
		Subtotal	**12**

Computer Support

CIT	232	Help Desk Operations	3
CIT	234	Advanced Productivity Software	3
CIT	236	Advanced Data Organization	3
		CIT Technical Course	3
		Subtotal	**12**

Geographic Information Systems

CIT	125	Introduction to GIS	3
CIT	225	GIS Software Tools	3
CIT	229	Selected Topics in GIS	3
CIT	253	Data-Driven Web Pages: Topic	3
		Subtotal	**12**
		OR	
GIS	110	Spatial Data Analysis and Map Interpretation	3
GIS	120	Introduction to Geographic Information Systems	3
GIS	210	Advanced Geographic Information Systems	3
CIT	253	Data-Driven Web Pages: Topic	3
		Subtotal	**12**

Software Support

CIT	234	Advanced Productivity Software	3
CIT	236	Advanced Data Organization	3
CIT	253	Data-Driven Web Pages: Topic	3
ENG	102	Writing II OR	3
		Oral Communications	(3)
		Subtotal	**12**

Computer Science Track - 110101714

(Offered at BLC, BSC, HEC, HPC, HZC, MYC)

ENG	102	Writing II	3
MAT	184	Calculus II	3
		Approved Computer Science Sequence* (One course in the sequence is taken as part of the core)	9-11
		Track Subtotal	**15-17**
		Total	**62-64**

Computer Science Track Course Sequences:*

Offerings vary per college.

University of Kentucky Computer Science Track Sequence

CS	215	Introduction to Program Design, Abstraction, and Problem Solving	4
CS	216	Introduction to Software Engineering	3
CS	275	Discrete Mathematics	4
		Sequence Subtotal	**11**

Information Security Track - 110101712

(Offered at ASC, BSC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

CIT	182	Perimeter Defense	3
CIT	184	Attacks and Exploits	3
CIT	217	UNIX/Linux Administration	3
		Approved Network Elective Course	6
		Approved Security Elective Course	3
		Approved CIT Technical Course(s)	6
		Track Subtotal	**24**
		Total	**68**

Internet Technologies Track - 110101710

(Offered at ASC, BLC, BSC, ELC, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC)

Complete two of the following not taken in the program core:

CIT	150	Internet Technologies	3
CIT	155	Web page Development	3
CIT	157	Web Site Design and Production	3
		Subtotal	6
CIT	253	Data-Driven Web Pages: Topic	3
CIT	257	Applied Internet Technologies OR	3
CIT	258	Internet Technologies Seminar	(3)
		Completion of Internet Technologies Specialization Sequence*	12
		Track Subtotal	**24**
		Total	**68**

*Internet Technologies Track Specialization Sequences:

Web Programming Specialization Sequence:

		Approved Level I Web Programming Language	3
		Approved Level II Web Programming Language	3
CIT	171	SQL I	3
		Approved CIT Technical Course	3
		Subtotal	**12**

Web Administration Specialization Sequence:

CIT	219	Internet Protocols	3
CIT	255	Web Server Administration	3
CIT	214	Microsoft Server Configuration AND	3
CIT	215	Microsoft Server Administration	3
		OR	
CIT	214	Microsoft Server Configuration AND	(3)
CIT	216	Microsoft Server Advanced Services	(3)
		OR	
CIT	217	UNIX/Linux Net Infrastructure AND	(3)
CIT	218	UNIX/Linux Net Infrastructure	(3)
		Subtotal	**12**

Network Administration Track - 110101708

(Offered at ASC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

		Network Administration Specialization Sequence	12
		Approved CIT Technical Courses	8-12
		Track Subtotal	**20-24**
		Total	**64-68**

Network Administration Specialization Sequences:

Microsoft Windows Administration Specialization Sequence

CIT	213	Microsoft Client Configuration	3
CIT	214	Microsoft Server Configuration	3
CIT	215	Microsoft Server Administration	3
CIT	216	Microsoft Server Advanced Series	3
		Subtotal	**12**

Cisco Networking Associate –Specialization Sequence

CIT	167	Routing & Switching Essentials	4
CIT	209	Scaling Networks	4
CIT	212	Connecting Networks	4
		Subtotal	**12**

Network Technologies Track - 110101713

(Offered at ASC, BLC, HEC, MDC, MYC, OWC)

CIT	219	Internet Protocols	3
CIT	288	Network Security	3
		Approved Level I and Level II Network Technologies Specialization Sequence	12
		Approved Level I, Level II, or Level III Network Technologies Specialization Sequence	4-6
		Track Subtotal	**22-24**
		Total	**66-68**

Approved Level I Network Technologies Specialization Sequences*

Microsoft Windows Sequence I

		Any 6 credit hours of course work from the Approved Microsoft Windows Network Specialization Course list	6

UNIX/Linux Sequence I

CIT	217	UNIX/Linux Administration AND	3
CIT	218	UNIX/Linux Net Infrastructure	3

Cisco Sequence I

CIT	167	Routing & Switching Essentials	4

Security Sequence I

		Any 6 credit hours of course work from the Approved Security Specialized Sequence Course list which is not taken as part of another sequence.	6
		Sequence Subtotal	**4 - 6**

Approved Level II Network Technologies Specialization Sequences*

Microsoft Windows Sequence II

		Any 6 credit hours of course work from the Approved Microsoft Windows Network Specialization Course list (after completing the requirements for the Microsoft Windows Specialization Sequence I), or other courses as approved by the CIT Program Coordinator	6

UNIX/Linux Sequence II

Choose two:

CIT	255	Web Server Administration OR	3
CIT	286	UNIX/Linux OS Security	(3)

Choose one of the following:

CIT	140	JavaScript I	3
CIT	141	PHP I	3
CIT	142	C++ I	3
CIT	144	Python I	3
CIT	145	Perl I	3
CIT	149	Java I	3
CIT	255	Web Server Administration	3
CIT	286	UNIX/Linux OS Security, OR	3
		University Level I programming Languages as approved by local Program Coordinator	3-4

Cisco Sequence II

CIT	209	Scaling Networks	4
CIT	212	Connecting Networks	4
		Sequence Subtotal	8

Approved Level III Network Technologies Specialization Sequences*

Internet Servers Administration Sequence

CIT	255	Web Server Administration	3
CIT	265	MS Applications Servers	3

Microsoft Windows Sequence III

		Any 6 credit hours of course work from the Approved Microsoft Windows Network Specialization Course list (after completing the requirements for the Microsoft Windows Sequence II), or other courses as approved by the CIT Program Coordinator	6
		Sequence Subtotal	**6**

Programming Track - 110101709

(Offered at BLC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC,WKC)

CIT	130	Productivity Software	3
		Approved CIT Technical Course(s)	6
		Programming Track Specialization Sequence	15
		Track Subtotal	**24**
		Total	**68**

Programming Track Specialization Sequences:

Programming Information Systems Specialization Sequence

CIT	171	SQL I	3
		Approved Level II Programming Language	3
		Approved Level I, II or III Programming Language	3
		Approved Programming Management Course	3
		Approved Programming Business Course	3
		Subtotal	**15**

Programming Software Development Specialization Sequence

		Approved Level I Programming Language	3
		Approved Level II Programming Language	3
		Approved Level II Programming Language	3
		Approved Level I, II , OR III Programming Language	3
CIT	253	Data-Driven Web Pages: Topic	3
		Subtotal	**15**

Video Game Design Track - 110101715

(Offered at BLC, HEC, HZC, MYC, MDC)

CIT/IMD	124	Introduction to Game Development	3
CIT/IMD	272	Game Design Theory	3
CIT/IMD	274	Seminar in Game Development	3
	AND		
CIT/IMD	221	Computer Graphics AND	3
CIT/IMD	222	3D Modelling for Video Games AND	3
CIT/IMD	223	3D Animation for Video Games AND	3
CIT/IMD	273	Game Production AND	3
		Video Game Design Elective	3
	OR		
DGD	131	3D Texturing and Lighting I AND	(3)
DGD	132	Introduction to 3D Graphics AND	(3)
DGD	234	3D Animation AND	(3)
DGD	236	Game Engines I AND	(3)
DGD	237	Game Engines II	(3)
		Track Subtotal	**24**
		Total	**68**

Data Center Technologies Track – 110101716

(Offered at JFC,WKY)

CIT	167	Routing and Switching Essentials	4
CIT	201	Information Storage Management	3
CIT	214	Microsoft Server Configuration	3
CIT	217	Unix/Linus Administration	3
CIT	203	Introduction to Virtualization	3
CIT	204	VMware Optimize and Scale	3
CIT	205	Cloud Infrastructure and Services	3
		Track Subtotal	**22**
		Total	**66**

Course Choice Lists

Approved Business Courses*

ACT	101	Fundamentals of Accounting	3
ACC	201	Financial Accounting I	3
BAS	160	Introduction to Business	3
IFM	128	Principles of Informatics	3
IFM	211	Collaboration Software	3
		Any business or informatics course approved by Program Coordinator	3

Approved Management Courses*

BAS	200	Small Business Management	3
BAS	274	Human Resource Management	3
BAS	283	Principles of Management	3
BAS	287	Supervisory Management	3
BAS	288	Personal and Organizational Leadership	3
MFG	256	Production Management	3
OST	275	Office Management	3
QMS	101	Introduction to Quality Systems	3
QMS	201	Customer Service Improvement Skills	3
		Any management course approved by Program Coordinator	3

Approved Level I Networking Courses*

CIT	160	Intro to Networking Concepts	4
CIT	161	Introduction to Networks	4

Approved Network Elective Courses*

CIT	167	Routing & Switching Essentials	4
CIT	209	Scaling Networks	4
CIT	212	Connecting the Networks	4
CIT	214	Microsoft Server Configuration	3
CIT	215	Microsoft Server Administration	3
CIT	216	Microsoft Server Advanced Services	3
CIT	218	UNIX/Linux Net Infrastructure	3
CIT	219	Internet Protocols	3
CIT	260	Network Hardware Installation and Troubleshooting	3
CIT	263	Advanced Microsoft Topics	3
		Or other Microsoft networking courses as approved by the CIT Program Coordinator	3

Approved Security Elective Courses*

CIT	284	Computer Forensics	3
CIT	285	Windows OS Security	3
CIT	286	UNIX/Linux OS Security	3
CIT	287	Cisco OS Security	3
CIT	288	Network Security	3

Approved Microsoft Windows Network Specialization Courses*

CIT	213	Microsoft Client Configuration	3
CIT	214	Microsoft Server Configuration	3
CIT	215	Microsoft Server Administration	3
CIT	216	Microsoft Server Advanced Services	3
CIT	265	MS Applications Servers	3
CIT	266	MS Enterprise Administration	3

Approved Security Sequence Courses*

CIT	182	Perimeter Defense and Countermeasures	3
CIT	184	Attacks and Exploits	3
CIT	284	Computer Forensics	3
CIT	285	Windows OS Security	3
CIT	286	UNIX/Linus OS Security	3

Approved Level I Programming Language Courses*

CIT	140	JavaScript I	3
CIT	141	PHP I	3
CIT	142	C++ I	3
CIT	143	C# I	3
CIT	144	Python I	3
CIT	145	Perl I	3
CIT	147	Programming I: Language	3
CIT	148	Visual Basic I	3
CIT	149	Java I	3
CIT	171	SQL I	3
		University Level I programming language as approved by local Program Coordinator	3-4

Approved Level II Programming Language Courses*

CIT	241	PHP II	3
CIT	242	C++ II	3
CIT	243	C# II	3
CIT	244	Python II	3
CIT	246	2D Game Development: Language	3
CIT	247	Programming II: Language	3
CIT	248	Visual Basic II	3
CIT	249	Java II	3
CIT	271	SQL II	3
		University Level II programming language as approved by local Program Coordinator	3-4

Approved Level III Programming Language Courses*

CIT	276	3D Game Development: Language	3
CIT	277	Programming III: Language	3
CIT	278	Visual Basic III	3
		University Level III programming language as approved by local Program Coordinator	3-4

Approved Level I Web Programming Language Courses*

CIT	141	PHP I	3
CIT	148	Visual Basic I	3
CIT	149	Java I	3

Approved Level II Web Programming Language Courses*

CIT	241	PHP II	3
CIT	248	Visual Basic II	3
CIT	249	Java II	3

Approved Social Media Courses*

CIT	151	Social Media I	3
CIT	152	Social Media Tools and Technologies	3
CIT	251	Social Media II	3

Approved Mobile Apps Programming Courses*

CIT	140	JavaScript I	3
CIT	143	C# I	3
CIT	149	Java I	3

Approved Video Game Design Electives*

		Level II Programming Language	3
CIT	246	2-D Game Development: [Language TBA]	3
CIT	276	3-D Game Development: [Language TBA]	3

Approved CIT Technical Courses*

		Additional CIT Course(s) EXCEPT CIT 103	1-3

*Or other courses approved by Computer & Information Technologies Program Coordinator

Note: Students may not use one course to fulfill multiple requirements.

Students may choose CIT 290 or COE 199 for a maximum of 3 credit hours.

Certificates

Computer Technician - 1101013289

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

CIT	105	Introduction to Computing	3
CIT	111	Computer Hardware and Software	4
		Approved Level I Networking Course	4
CIT	180	Security Fundamentals	3
		Total	**14**

CIT Fundamentals - 1101013309

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

CIT	105	Introduction to Computing	3
CIT	111	Computer Hardware and Software	4
CIT	120	Computational Thinking	3
CIT	150	Internet Technologies OR	3
CIT	155	Web Page Development OR	(3)
CIT	157	Web Site Design and Production	(3)
CIT	170	Database Design Fundamentals	3
CIT	180	Security Fundamentals	3
		Approved Level I Networking Course	4
		Approved Level I Programming Language	3
		Total	**26**

Productivity Software Specialist - 1101013299

(Offered at ASC, BLC, BSC, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC,WKC)

CIT	105	Introduction to Computing	3
CIT	130	Productivity Software	3
CIT	234	Advanced Productivity Software	3
CIT	236	Adv. Data Organization Software	3
		Total	**12**

Computer Tech Basic - 1101013319

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

CIT	105	Introduction to Computers	3
CIT	111	Computer Hardware and Software	4
		Approved Level I Networking Course	4
		Total	**11**

Computer Support Technician - 1101013329

(Offered at ASC, BLC, BSC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, WKC)

CIT	130	Productivity Software	3
CIT	111	Computer Hardware and Software	4
CIT	232	Help Desk Operations	3
CIT	234	Advanced Productivity Software	3
CIT	236	Advanced Data Organization Software	3
		Total	**16**

Information Security Specialist - 1101013339

(Offered at ASC, BLC, BSC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC,WKC)

		Approved Level I Networking Course	4
CIT	180	Security Fundamentals	3
CIT	182	Perimeter Defense	3
CIT	184	Attacks and Exploits	3
		Approved Security/Network Admin Elective Courses	6
		Total	**19**

Microsoft Network Administrator - 1101013349

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

		Approved Level I Networking Course	4
CIT	213	Microsoft Client Configuration	3
CIT	214	Microsoft Server Configuration	3
CIT	215	Microsoft Server Administration	3
CIT	216	Microsoft Server Advanced Services	3
		Approved CIT Technical Course	3
		Total	**19**

CISCO Networking Associate - 1101013359

(Offered at ASC, BLC, BSC, ELC, HEC, HPC, HZC, JFC, MDC, MYC, SEC, SKY, WKC)

CIT	161	Introduction to Networks	4
		Cisco Network Associate Specialization Sequence	12
		Total	**16**

Network Technologies Specialist - 1101013369

(Offered at ASC, BLC, BSC, HEC, HPC, HZC, MDC, MYC, OWC, SEC)

CIT	219	Internet Protocols	3
CIT	288	Network Security	3
		Approved Level I and Level II Network Technologies Microsoft Windows Course Sequence OR	12
		Approved Level I and Level II Network Technologies Cisco Course Sequence OR	(12)
		Approved Level I and Level II Network Technologies UNIX/Linux Course Sequence	(12)
		Approved Level I, Level II, or Level III Network Technologies Course Sequence	4-6
		Total	**22-24**

CISCO Networking Enhanced - 1101013379

(Offered at ASC, BLC, BSC, ELC, HEC, HPC, HZC, JFC, MDC, MYC, SEC, SKY, SMC,WKC)

CIT	161	Introduction to Networks	4
		Cisco Network Associate Specialization Sequence	12
		Approved CIT Technical Courses	8-9
		Total	**24-25**

A+ - 1101013389

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

CIT	111	Computer Hardware and Software	4
		Total	**4**

Net+ - 1101013399

(Offered at ASC, BLC, BSC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC)

CIT	160	Intro to Networking Concepts	4
		Total	**4**

Security+ - 1101013409

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC)

CIT	180	Security Fundamentals	3
		Total	**3**

Microsoft Enterprise Administrator - 1101013419

(Offered at ASC, BLC, BSC, ELC, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, WKC)

		Approved Level I Networking Course	4
CIT	213	Microsoft Client Configuration	3
CIT	214	Microsoft Server Configuration	3
CIT	215	Microsoft Server Administration	3
CIT	216	Microsoft Server Advanced Services	3
		Additional Microsoft course as approved by CIT Program Coordinator	3
		Approved CIT Technical Course	3
		Total	**22**

Programming – 1101013429

(Offered at ASC, BLC, BSC, ELC, GTW, HZC, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC,WKC)

CIT	120	Computational Thinking	3
		Approved Level I Programming Language	3
		Approved Level II Programming Language	3
		Approved Level I, II, or III Programming Language	3
		Total	**12**

Web Programming - 1101013439

(Offered at ASC, BLC, BSC, ELC, GTW, HZC, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC)

CIT	120	Computational Thinking	3
CIT	150	Internet Technologies	3
CIT	155	Web Page Development	3
CIT	157	Web Site Design and Production	3
CIT	171	SQL I	3
CIT	253	Data-Driven Web Pages: Topic	3
		Approved Level I Web Programming Language	3
		Approved Level II Web Programming Language	3
		Total	**24**

Web Administration - 1101013449

(Offered at ASC, BLC, BSC, ELC, HZC, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC)

CIT	120	Computational Thinking	3
CIT	150	Internet Technologies	3
CIT	155	Web Page Development	3
CIT	157	Web Site Design and Production	3
CIT	253	Data-Driven Web Pages: Topic	3
CIT	219	Internet Protocols	3
CIT	255	Web Server Administration	3
CIT	213	Microsoft Client Configuration AND	3
CIT	215	Microsoft Server Administration	3
		OR	
CIT	213	Microsoft Client Configuration AND	(3)
CIT	216	Microsoft Server Advanced Services	(3)
		OR	
CIT	217	UNIX/Linux Administration AND	(3)
CIT	218	UNIX/Linux Net Infrastructure	(3)
		Total	**27**

Social Media Specialist – 1101013469

(Offered at ASC, BSC, HZC, HEC, HPC, HZC, MDC, MYC, OWC, SEC, SMC)

CIT	105	Introduction to Computers OR demonstrated competency	0-3
CIT	155	Web Page Development	3
CIT	151	Social Media I	3
CIT	152	Social Media Tools and Technologies	3
CIT	251	Social Media II	3
BAS	160	Introduction to Business	3
BAS	282	Introduction to Marketing	3
		Total	**18-21**

Digital Forensics – 1101013459

(Offered at ASC, BSC, HZC, HEC, MDC, OWC, SKY, SEC, SMC,WKC)

CIT	105	Introduction to Computers	3
CIT	111	Hardware and Software	4
CIT	160	Intro to Networking Concepts	4
CRJ	204	Criminal Investigations	3
CIT	180	Security Fundamentals	3
CIT	284	Computer Forensics	3
		Total	**20**

Mobile Apps Development – 1101013479

(Offered at BSC, ELC, GTW, HEC, HZC, MDC, MYC, OWC, SKY, SEC, SMC)

CIT	105	Introduction to Computers	3
CIT	120	Computational Thinking	3
		Approved Mobile App Programming Language I	3
		Approved Mobile App Programming Language II	3
CIT	140	JavaScript I	3
CIT	155	Web Page Development	3
CIT	157	Web Site Design and Production	3
		Approved Mobile Apps Programming elective as approved by Local Program Coordinator.	3
		Total	**24**

Informatics Programming – 1101013489

(Offered at)

CIT	120	Computational Thinking	3
INF	282	Introduction to Databases OR	3
CIT	170	Database Design Fundamentals	(3)
		Informatics Programming Language Pair	6-7

Informatics Programming Language Pairs

INF	120	Elementary Programming AND	3
INF	260	Object Oriented Programming I	3
		OR	
CIT	149	Java I AND	3
CIT	249	Java II	3
		OR	
CS	115	Intro to Computer Programming AND	3
CS	215	Intro Program Design, Instruction, and Problem Solving	4
		OR	
CIT	142	C++ I AND	3
CIT	242	C++ II	3
		OR	
CIT	148	Visual Basic I AND	3
CIT	248	Visual Basic II	3
		OR	
CIT	143	C# I AND	3
CIT	243	C# II	3
		Total	**12-13**

Computerized Manufacturing and Machining

Work activities in machine shop involve applying knowledge of machine capabilities, the properties of materials, and shop practices to set-up and operate various machines. The skills needed to position work pieces, adjust machines, and verify the accuracy of machine functions and finish products are taught by classroom instruction, demonstration, and hands on experience.

Students enrolled in the Computerized Manufacturing & Machining program must achieve a minimum grade of "C" in each technical course

Associate in Applied Science

Computerized Manufacturing & Machining - 4805037019

(Offered at BLC, BSC, ELC, MYC, OWC, SKY,WKC)

General Education:

ENG	101	Writing I	3
MAT	116	Technical Mathematics OR	3
MAT	126	Technical Algebra and Trigonometry or Higher	(3)
		Heritage/Humanities	3
		Natural Sciences	3
		Social/Behavioral Sciences	3
		Subtotal	**15**
		Electives (Co-op or Practicum)	1
		Subtotal	**1**

Technical:

		Digital Literacy*	0-3
CMM	110	Fundamentals of Machine Tools A AND	3
CMM	112	Fundamentals of Machine Tools B OR	3
CMM	114	Fundamentals of Machine Tools	(6)
CMM	118	Metrology/Control Charts	2
CMM	120	Applied Machining I AND	3
CMM	122	Applied Machining II OR	3
CMM	124	Applied Machining	(6)
CMM	130	Manual Programming AND	3
CMM	132	CAD/CAM/CNC OR	3
CMM	134	Manual Programming/CAD/CAM/CNC OR	(6)
CMM	138	Intro to Programming & CNC Machines	(6)
CMM	210	Industrial Machining I AND	3
CMM	212	Industrial Machining II OR	3
CMM	214	Industrial Machining	(6)
CMM	220	Advanced Industrial Machining I AND	4
CMM	222	Advanced Industrial Machining II OR	2
CMM	224	Advanced Industrial Machining	(6)
CMM	2301	Intro to Conversational Programming AND	3
CMM	2302	Conversational Editing and Subroutines OR	3
CMM	230	Conversational Programming OR	(6)
CMM	234	CNC Machines and Coding Practices	(6)
CMM	2401	Intro to 3-D Code Sequencing and Tool path Production AND	3
CMM	2402	Advanced 3-D Code Sequencing and Macro Systems OR	3
CMM	240	Intro to 3-D Programming OR	(6)
CMM	244	Advanced Programming/Setup Practices	(6)
BRX	110	Basic Blueprint Reading for Machinist AND	2
BRX	210	Mechanical Blueprint Reading for Machinist OR	2
BRX	112	Blueprint Reading for Machinist	(4)
		Subtotal	**48-51**
		Total Credits	**64-67**

* Digital literacy must be demonstrated either by competency exam or by completing a computer/digital literacy course.

Diploma

CNC Machinist - 4805034069

(Offered at ASC, BLC, BSC, ELC, GTW, HPC, JFC, MYC, OWC, SEC, SKY, SMC, WKC)

General Education:

Area 1:

		Written Communication, Oral Communications, or Heritage/Humanities	3

Area 2:

		Social/Behavioral Science, Natural Science or Quantitative Reasoning	3
		Subtotal	**6**
		Electives (Co-op or Practicum)	1
		Subtotal	**1**

Technical:

		Digital Literacy*	0-3
CMM	110	Fundamentals of Machine Tools A AND	3
CMM	112	Fundamentals of Machine Tools B OR	3
CMM	114	Fundamentals of Machine Tools	(6)
CMM	118	Metrology/Control Charts	2
CMM	120	Applied Machining I AND	3
CMM	122	Applied Machining II OR	3
CMM	124	Applied Machining	(6)
CMM	130	Manual Programming AND	3
CMM	132	CAD/CAM/CNC OR	3
CMM	134	Manual Programming/CAD/CAM/CNC OR	(6)
CMM	138	Intro to Programming & CNC Machines	(6)
CMM	210	Industrial Machining I AND	3
CMM	212	Industrial Machining II OR	3
CMM	214	Industrial Machining	(6)
CMM	220	Advanced Industrial Machining I AND	4
CMM	222	Advanced Industrial Machining II OR	2
CMM	224	Advanced Industrial Machining	(6)
CMM	2301	Intro to Conversational Programming AND	3
CMM	2302	Conversational Editing and Subroutines OR	3
CMM	230	Conversational Programming OR	(6)
CMM	234	CNC Machines and Coding Practices	(6)
CMM	2401	Intro to 3-D Code Sequencing and Tool path Production AND	3
CMM	2402	Advanced 3-D Code Sequencing and Macro Systems OR	3
CMM	240	Intro to 3-D Programming OR	(6)
CMM	244	Advanced Programming/Setup Practices	(6)
BRX	110	Basic Blueprint Reading for Machinist AND	2
BRX	210	Mechanical Blueprint Reading for Machinist OR	2
BRX	112	Blueprint Reading for Machinist	(4)
		Subtotal	**48-51**
		Total Credits	**55-58**

Machinist - 4805034079

(Offered at ASC, BLC, BSC, ELC, GTW, JFC, MYC, OWC, SEC, SMC,WKC)

General Education:

Area 1:

		Written Communication, Oral Communications, or Heritage/Humanities	3

Area 2:

		Social/Behavioral Science, Natural Science or Quantitative Reasoning	3
		Subtotal	**6**
		Electives (Co-op or Practicum)	1
		Subtotal	**1**

Technical:

		Digital Literacy*	0-3
CMM	110	Fundamentals of Machine Tools A AND	3
CMM	112	Fundamentals of Machine Tools B OR	3
CMM	114	Fundamentals of Machine Tools	(6)
CMM	118	Metrology/Control Charts	2
CMM	120	Applied Machining I AND	3
CMM	122	Applied Machining II OR	3
CMM	124	Applied Machining	(6)
CMM	130	Manual Programming AND	3
CMM	132	CAD/CAM/CNC OR	3
CMM	134	Manual Programming/CAD/CAM/CNC OR	(6)
CMM	138	Intro to Programming & CNC Machines	(6)
CMM	210	Industrial Machining I AND	3
CMM	212	Industrial Machining II OR	3
CMM	214	Industrial Machining	(6)
CMM	220	Advanced Industrial Machining I AND	4
CMM	222	Advanced Industrial Machining II OR	2
CMM	224	Advanced Industrial Machining	(6)
BRX	110	Basic Blueprint Reading for Machinist AND	2
BRX	210	Mechanical Blueprint Reading for Machinist OR	2
BRX	112	Blueprint Reading for Machinist	(4)
		Subtotal	**36-39**
		Total Credits	**43-46**

Certificates

Exploratory Machining I - 4805033199

(Offered at ASC, BLC, BSC, ELC, GTW, HPC, JFC, MYC, OWC, SEC, SKY, SMC, WKC)

CMM	110	Fundamentals of Machine Tools A AND	3
CMM	112	Fundamentals of Machine Tools B AND	3
		Electives (Technical or Gen Ed) OR	5
CMM	114	Fundamentals of Machine Tools AND	(6)
		Electives (Technical or Gen Ed) OR	(5)
CMM	130	Manual Programming AND	(3)
CMM	132	CAD/CAM/CNC AND	(3)
		Elective (Technical or Gen Ed) OR	(6)
CMM	134	Manual Programming/CAD/CAM/CNC AND	(6)
		Elective (Technical or Gen Ed) OR	(6)
CMM	138	Intro to Programming & CNC Machines AND	(6)
		Elective (Technical or Gen Ed)	(6)
		Total Credits	**11-12**

Machine Tool Operator I - 4805033109

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, JFC, MYC, OWC, SEC, SKY, SMC,WKC)

CMM	110	Fundamentals of Machine Tools A AND	3
CMM	112	Fundamentals of Machine Tools B OR	3
CMM	114	Fundamentals of Machine Tools	(6)
CMM	130	Manual Programming AND	3
CMM	132	CAD/CAM/CNC OR	3
CMM	134	Manual Programming CAD/CAM/CNC OR	(6)
CMM	138	Intro to Programming & CNC Machines	(6)
BRX	110	Basic Blueprint Reading for Machinist OR	2
BRX	112	Blueprint Reading for Machinist	(4)
		Social/Behavioral Science, Natural Science, or Quantitative Reasoning	3
		Total Credits	**17-19**

Machine Tool Operator II - 4805033119

(Offered at ASC, BLC, BSC, ELC, GTW, HPC, JFC, MYC, OWC, SEC, SKY, SMC, WKC)

CMM	110	Fundamentals of Machine Tools A AND	3
CMM	112	Fundamentals of Machine Tools B OR	3
CMM	114	Fundamentals of Machine Tools	(6)
CMM	118	Metrology/Control Charts	2
CMM	120	Applied Machining I AND	3
CMM	122	Applied Machining II OR	3
CMM	124	Applied Machining	(6)
CMM	130	Manual Programming AND	3
CMM	132	CAD/CAM/CNC OR	3
CMM	134	Manual Programming CAD/CAM/CNC OR	(6)
CMM	138	Intro to Programming & CNC Machines	(6)
BRX	110	Basic Blueprint Reading for Machinist OR	2
BRX	112	Blueprint Reading for Machinist	(4)
		Digital Literacy*	0 – 3
		Social/Behavioral Science, Natural Science, or Quantitative Reasoning	3
		Total Credits	**25-30**

CNC Operator - 4805033129

(Offered at BLC, HPC, JFC, SEC, SMC,WKC)

CMM	110	Fundamentals of Machine Tools A AND	3
CMM	112	Fundamentals of Machine Tools B OR	3
CMM	114	Fundamentals of Machine Tools	(6)
CMM	118	Metrology/Control Charts	2
CMM	130	Manual Programming AND	3
CMM	132	CAD/CAM/CNC OR	3
CMM	134	Manual Programming CAD/CAM/CNC OR	(6)
CMM	138	Intro to Programming & CNC Machines	(6)
CMM	2301	Intro to Conversational Programming AND	3
CMM	2302	Conversational Editing and Subroutines OR	3
CMM	230	Conversational Programming OR	(6)
CMM	234	CNC Machines and Coding Practices	(6)
BRX	110	Basic Blueprint Reading for Machinist OR	2
BRX	112	Blueprint Reading for Machinist	(4)
		Computer/Digital Literacy*	0- 3
MAT	116	Technical Mathematics or	3
MAT	126	Technical Algebra and Trigonometry or Higher	(3)
		Total Credits	**25-30**

Tool & Die Apprentice - 4805033130

(Offered at BLC, JFC, SEC)

CMM	150	Shop Theory OR	2
CMM	110	Fundamentals of Machine Tools A	(3)
CMM	118	Metrology/Control Charts	2
CMM	151	Machinery's Handbook/Metallurgy OR	3
CMM	112	Fundamentals of Machine Tools B	(4)
CMM	152	Jigs, Fixtures and Gaging OR	3
CMM	120	Applied Machining I	(3)
CMM	153	Mold Theory	3
CMM	154	Die Theory	3
CMM	130	Manual Programming	3
CMM	132	CAD/CAM/CNC	3
BRX	110	Basic Blueprint Reading for Machinist	2
BRX	210	Mechanical Blueprint Reading	2
MAT	116	Technical Mathematics	3
WLD	151	Basic Welding A OR	2
		Computer/Digital Literacy* OR	(0-3)
IEX	295	Special Problems III	(3)
		Total Credits	**29-34**

CNC Machining & Waterjet Technology - 4805033189

(Offered at BLC, SEC)

CMM	138	Intro to Programming and CNC Machines	6
CMM	234	CNC Machines & Coding Practices	6
CMM	244	Advance Programming/Setup Practices	6
		Total Credits	**18**

* Computer/Digital literacy must be demonstrated either by competency exam or by completing a computer/digital literacy course

Construction Technology

The Construction Technology program is designed to prepare students for entry level positions in the construction industry. Residential and light commercial construction applications are taught. This program includes instructional units in blueprint reading, building site layout procedures, foundation systems, light framing construction methods, exterior and interior finish systems, concrete forming systems and construction safety. Units of instruction are designed to include lecture and practical experience in the lab or on-site projects. This program also offers an excellent prerequisite for students that plan to pursue a career in areas such as construction management, civil engineering or architectural design.

The Green Building Technology certificate familiarizes students with the principles of green building technologies and methods of sustainable construction. Emphasis is placed on green materials used in the construction of buildings along with alternative and/or renewable energy systems. Covers both Leadership in Energy and Environmental Design (LEED) and the National Green Building Standard's rating systems for the certification process of green buildings.

Progression in the Construction Technology Program is contingent upon achievement of a grade of "C" or better in each technical and mathematics course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

Associate in Applied Science

Construction Technology - 4602017029

(Offered at BLC, ELC)

General Education Requirements:

		Written Communication	3
MAT	105	Business Mathematics OR	
		Higher level Quantitative Reasoning course	3
		Social/Behavioral Sciences	3
		Heritage/Humanities	3
		Natural Sciences	3
		Oral Communications	3
		Subtotal	**18**

Technical Requirements:

		Digital Literacy or demonstrated competency	0-3
BRX	220	Blueprint Reading For Construction	3
CAR	126	Intro to Construction	3
CAR	127	Intro to Construction-Lab	1
CAR	140	Surveying & Foundations	3
CAR	141	Surveying & Foundations-Lab	2
CAR	190	Light Frame Construction I	3
CAR	191	Light Frame Const. I-Lab	2
CAR	196	Light Frame Construction II	3
CAR	197	Light Frame Const. II-Lab	2
CAR	200	Light Frame Construction III	3
CAR	201	Light Frame Const. III-Lab	2

CAR	298	Practicum in Construction OR	2
CAR	299	Co-op in Construction	(2-4)
ISX	100	Industrial Safety	3
		Technical Electives*	10
		Subtotal	**42-47**
		Total	**60-65**

Note: Digital Literacy must be demonstrated either by competency exam or by completing an approved digital literacy course.

***Technical Electives: (This list is not all inclusive. Other courses [technical or general education] may be taken as approved by Construction Technology instructor.)**

BRX	120	Basic Blueprint Reading	3
CAR	150	Construction Formwork	3
CAR	151	Construction Formwork - Lab	2
CAR	198	Special Topics in Construction	1 - 6
CAR	240	Light Frame Construction IV	3
CAR	241	Light Frame Const. IV-Lab	2

Diploma

Construction Carpenter - 4602014019

(Offered at BLC, BSC, ELC, JFC, MYC, SEC, SMC)

General Education Requirements:

Area 1:

Written Communication, Oral Communications, or Humanities/Heritage	3

Area 2:

Social/Behavioral Sciences, Natural Sciences, or Quantitative Reasoning	3
Subtotal	**6**

Note: WPP200 or EFM 100 may be taken for 3 credit hours of Social/Behavioral Sciences to meet the Diploma General Education requirements.

Technical Requirements:

		Digital Literacy course OR demonstrated competency	0-3
BRX	220	Blueprint Reading for Construction	3
CAR	126	Intro to Construction	3
CAR	127	Intro to Construction-Lab	1
CAR	140	Surveying & Foundations	3
CAR	141	Surveying & Foundations-Lab	2
CAR	190	Light Frame Construction I	3
CAR	191	Light Frame Const. I –Lab	2
CAR	196	Light Frame Construction II	3
CAR	197	Light Frame Const. II–Lab	2
CAR	200	Light Frame Construction III	3
CAR	201	Light Frame Const. III–Lab	2
CAR	298	Practicum in Construction OR	2
CAR	299	Co-op in Construction	(2-4)
ISX	100	Industrial Safety	3
		Technical Electives*	10
		Subtotal	**42-47**
		Total	**48-53**

NOTE: Digital Literacy must be demonstrated either by competency exam or by completing a digital literacy course.

***Technical Electives: (This list is not all inclusive. Other courses [technical or general education] may be taken as approved by Carpentry instructor.)**

BRX	120	Basic Blueprint Reading	3
CAR	150	Construction Formwork	3
CAR	151	Construction Formwork - Lab	2
CAR	198	Special Topics in Construction	1 - 6
CAR	240	Light Frame Construction IV	3
CAR	241	Light Frame Const. IV-Lab	2

Finish Carpenter - 4602014029

(Offered at JFC)

General Education Requirements: (6-9 credit hours)

Area 1:

Written Communication, Oral Communications, Or Humanities/Heritage	3

Area 2:

Social/Behavioral Sciences, Natural Sciences or Quantitative Reasoning	3
Subtotal	**6**

Note: WPP 200 or EFM 100 may be taken for 3 credit hours of Social/Behavioral Sciences to meet the Diploma General Education requirements.

Technical Requirements:

		Digital Literacy course OR demonstrated competency	0-3
INF	105	Introduction to Painting	2
INF	111	Advanced Painting	2
INF	115	Introduction to Wall covering	2
INF	121	Advanced Wall Covering	2
INF	125	Introduction to Drywall	2
INF	131	Advanced Drywall	2
INF	205	Introduction to Acoustical Carpentry	3
INF	211	Advanced Acoustical Carpentry	2
INF	220	Customer Relations	2
INF	298	Practicum (or)	2
CAR	299	Cooperative Education in Construction	(2-4)
		Subtotal	**24-29**
		Total Credits	**30-35**

Note: Digital Literacy must be demonstrated either by competency exam or by completing an approved digital literacy course.

Certificates

Carpenter Helper - 4602013109

(Offered at BLC, BSC, ELC, HPC, HZC, JFC, MYC, SEC, SMC)

BRX	220	Blueprint Reading for Construction	3
CAR	126	Intro to Construction	3
CAR	127	Intro to Construction-Lab	1
CAR	140	Surveying & Foundations	3
CAR	141	Surveying & Foundations-Lab	2
CAR	190	Light Frame Construction I – Floors and Walls	3
CAR	191	Light Frame Construction I – Floors and Walls (Lab)	2
		Total Credits	**17**

Construction Forms Helper - 4602013029

(Offered at BLC, BSC, ELC, HPC, HZC, JFC, MYC, SEC, SMC)

BRX	220	Blueprint Reading for Construction	3
CAR	126	Intro to Construction	3
CAR	127	Intro to Construction-Lab	1
CAR	150	Construction Formwork	3
CAR	151	Construction Formwork - Lab	2
		Electives: (*Suggested Technical Electives)	6
		Total Credits	**18**

***Suggested Technical Electives:**

(This list is not all inclusive. Other courses [technical or general education] may be taken as approved by Construction Technology Program Coordinator.

BRX	120	Basic Blueprint Reading	(3)
ISX	100	Industrial Safety	(3)
CAR	140	Construction Surveying and Foundation Systems	(3)
CAR	141	Construction Surveying and Foundation Systems-Lab	(2)
CAR	150	Construction Formwork	(3)
CAR	151	Construction Formwork – Lab	(2)
CAR	190	Light Frame Construction I- Floors and Walls	(3)
CAR	191	Light Frame Construction I- Floors and Walls-Lab	(2)

CAR	196	Light Frame Construction II- Ceilings and Roofs	(3)
CAR	197	Light Frame Construction II- Ceilings and Roofs-Lab	(2)
CAR	198	Special Topics in Construction	(1 – 6)
CAR	200	Light Frame Construction III- Exterior and Interior Finish	(3)
CAR	201	Light Frame Construction III- Exterior and Interior Finish-Lab	(2)
CAR	240	Light Frame Construction IV – Cabinetry and Trim Carpentry Techniques	(3)
CAR	241	Light Frame Construction IV – Cabinetry and Trim Carpentry Techniques (Lab)	(2)
DLC	100	Digital Literacy	3

***Suggested General Education Electives:**

TEC	200	Technical Communications	(3)
COM	181	Basic Public Speaking	(3)
COM	252	Intro to Interpersonal Communications	(3)
MAT	105	Business Mathematics	(3)
MAT	110	Applied Mathematics	(3)
MAT	116	Technical Mathematics	(3)
PHX	150	Introductory Physics	(3)
EFM	100	Personal Financial Management	(3)
WPP	200	Workplace Principles	(3)

Note: TEC 200, PHX 150, EFM 100 and WPP 200 may be used to fill diploma general education requirements only.

Residential Carpenter - 4602013059

(Offered at BLC, BSC, ELC, HPC, HZC, JFC, MYC, SEC, SMC)

BRX	220	Blueprint Reading for Construction	3
CAR	126	Intro to Construction	3
CAR	127	Intro to Construction-Lab	1
CAR	140	Surveying & Foundations	3
CAR	141	Surveying & Foundations-Lab	2
CAR	190	Light Frame Construction I – Floors and Walls	3
CAR	191	Light Frame Construction I – Floors and Walls (Lab)	2
CAR	196	Light Frame Construction II – Ceilings and Roofs	3
CAR	197	Light Frame Construction II – Ceilings and Roofs (Lab)	2
CAR	200	Light Frame Construction III – Exterior and Interior Finish	3
CAR	201	Light Frame Construction III – Exterior and Interior Finish (Lab)	2
CAR	240	Light Frame Construction IV – Cabinetry and Trim Carpentry Techniques	3
CAR	241	Light Frame Construction IV – Cabinetry and Trim Carpentry Techniques (Lab)	2
		Total Credits	**32**

Residential Roofer - 4602013069

(Offered at BLC, BSC, ELC, HPC, HZC, JFC, MYC, SEC, SMC)

BRX	220	Blueprint Reading for Construction	3
CAR	126	Intro to Construction	3
CAR	127	Intro to Construction-Lab	1
CAR	196	Light Frame Construction II – Ceilings and Roofs	3
CAR	197	Light Frame Construction II – Ceilings and Roofs (Lab)	2
		Total Credits	**12**

Residential Site Layout Assistant - 4602013079

(Offered at BLC, BSC, ELC, HPC, HZC, JFC, MYC, SEC, SMC)

CAR	126	Intro to Construction	3
CAR	127	Intro to Construction-Lab	1
CAR	140	Surveying & Foundations	3
CAR	141	Surveying & Foundations-Lab	2
		Electives: *Suggested Technical Electives	6
		Total Credits	**15**

***Suggested Technical Electives:**

(This list is not all inclusive. Other courses (technical or general education) may be taken as approved by Construction Technology Program Coordinator.

BRX	120	Basic Blueprint Reading	(3)
BRX	220	Blueprint Reading for Construction	(3)
ISX	100	Industrial Safety	(3)
CAR	150	Construction Formwork	(3)
CAR	151	Construction Formwork-Lab	(2)
CAR	190	Light Frame Construction I-Floors and Walls	(3)
CAR	191	Light Frame Construction I-Floors and Walls	(2)
CAR	196	Light Frame Construction II-Ceilings and Walls	(3)
CAR	197	Light Frame Construction II-Ceilings and Walls-Lab	(2)
CAR	198	Special Topics in Construction	(1-6)
CAR	200	Light Frame Construction III-Exterior and Interior Finish	(3)
CAR	201	Light Frame Construction III-Exterior and Interior Finish-Lab	(2)
CAR	240	Light Frame Construction IV-Cabinetry and Trim Carpentry Techniques	(3)
CAR	241	Light Frame Construction IV-Cabinetry and Trim Carpentry Techniques-Lab	(2)
DLC	100	Digital Literacy	3

***Suggested General Education Electives:**

TEC	200	Technical Communications	(3)
COM	181	Basic Public Speaking	(3)
COM	252	Intro to Interpersonal Communications	(3)
MAT	105	Business Mathematics	(3)
MAT	110	Applied Mathematics	(3)
MAT	116	Technical Mathematics	(3)
PHX	150	Introductory Physics	(3)
EFM	100	Personal Financial Management	(3)
WPP	200	Workplace Principles	(3)

Note: TEC 200, PHX 150, EFM 100 and WPP 200 may be used to fill diploma general education requirements only.

Rough Carpenter - 4602013089

(Offered at BLC, BSC, ELC, HPC, HZC, JFC, MYC, SEC, SMC)

BRX	220	Blueprint Reading for Construction	3
CAR	126	Intro to Construction	3
CAR	127	Intro to Construction-Lab	1
CAR	140	Surveying & Foundations	3
CAR	141	Surveying & Foundations-Lab	2
CAR	190	Light Frame Construction I – Floors and Walls	3
CAR	191	Light Frame Construction I – Floors and Walls (Lab)	2
CAR	196	Light Frame Construction II – Ceilings and Roofs	3
CAR	197	Light Frame Construction II – Ceilings and Roofs (Lab)	2
		Total Credits	**22**

Basic Carpenter - 4602013139

(Offered at BLC, BSC, ELC, HPC, HZC, JFC, MYC, SEC, SMC)

CAR	126	Intro to Construction	3
CAR	127	Intro to Construction-Lab	1
		Electives: (Any five [5] additional credits, program or otherwise)	5
		Total Credits	**9**

Acoustical Carpenter - 4602013119

(Offered at BSC, ELC, HZC, JFC, SEC)

INF	205	Introduction to Acoustical Carpentry	3
INF	211	Advanced Acoustical Carpentry	2
		Electives: *Technical Electives	6
		Total Credits	**11**

Dry Waller - 4602013039

(Offered at BSC, ELC, HZC, JFC, SEC)

INF	125	Introduction to Drywall	2
INF	131	Advanced Drywall	2
		Electives: *Technical Electives	4
		Total Credits	**8**

Painter, Interior Finish - 4602013049

(Offered at BSC, HZC, JFC, SEC)

INF	105	Introduction to Painting	2
INF	111	Advanced Painting	2
		Electives: *Technical Electives	2
		Total Credits	**6**

Painter, Paper Hanger - 4602013129

(Offered at BSC, HZC, JFC, SEC)

INF	105	Introduction to Painting	2
INF	111	Advanced Painting	2
INF	115	Introduction to Wallcovering	2
INF	121	Advanced Wallcovering	2
		Total Credits	**8**

Green Building Technology - 4602013159

(Offered at HZC, JFC, SEC)

BRX	220	Blueprint Reading for Construction	3
CAR	270	Green Building	3
CAR	126	Introduction to Construction	3
CAR	127	Introduction to Construction Lab	1
		Electives (*Suggested Technical Electives)	10
		Total Credits	**20**

***Suggested Technical Electives:**

Select a minimum of 10 credit hours. (This list is not all inclusive. Other courses may be taken as approved by Construction Technology Instructor.)

CAR	140	Surveying & Foundations	3
CAR	141	Surveying & Foundations-Lab	2
CAR	190	Light Frame Construction I – Floors and Walls	3
CAR	191	Light Frame Construction I – Floors and Walls (Lab)	2
CAR	196	Light Frame Construction II – Ceilings and Roofs	3
CAR	197	Light Frame Construction II – Ceilings and Roofs (Lab)	2
CAR	200	Light Frame Construction III-Exterior and Interior Finish	3
CAR	201	Light Frame Construction III-Exterior and Interior Finish-Lab	2

NCCER Skills Standard Level I – 4602013169

(Offered at HZC, SEC)

BRX	220	Blueprint Reading for Construction OR	3
BRX	2201	Basic Construction Prints AND	(1)
BRX	2202	Construction Blueprints	(2)
CAR	126	Introduction to Construction	3
CAR	127	Introduction to Construction Lab	1
CAR	190	Light Frame Construction I – Floors and Walls	3
CAR	191	Light Frame Construction I – Floors and Walls (Lab)	2
CAR	196	Light Frame Construction II – Ceilings and Roofs	3
CAR	197	Light Frame Construction II – Ceilings and Roofs (Lab)	2
CAR	2001	Light Frame Construction III – Interior AND	1
CAR	2011	Light Frame Construction III – Lab Interior OR	1
CAR	2002	Light Frame Construction III – Exterior AND	(1)
CAR	2012	Light Frame Construction III – Lab Exterior OR	(1)
CAR	200	Light Frame Construction III AND	(3)
CAR	201	Light Frame Construction III-Laboratory	(2)
CAR	299	Cooperative Education in Construction	2-4
ISX	100	Industrial Safety OR Approved Safety course by Program Coordinator	3
		Total Credits	**24-29**

Cosmetology

Knowledge of the theories of hair, skin, and nail care is coupled with practice of the various techniques used in salons.

Any person enrolling in a cosmetology program shall meet KCTCS admission requirements and complete an application for enrollment provided by the Board of Hairdressers and Cosmetologists. As required by the Board of Hairdressers and Cosmetologists, the applicant shall furnish proof that he or she has earned a high diploma or its equivalent.

Documentation of digital literacy as defined by KCTCS is required prior to graduation for the diploma credential.

Progression in the Cosmetology program is contingent upon achievement of a grade of "C" or better in each technical course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

After successful completion of the prescribed 1800 hours of instruction and the six-month apprenticeship, program graduates are eligible to take the examination administered by the Kentucky Board of Hairdressers and Cosmetology to become licensed cosmetologists.

After successful completion of the prescribed 1000 hours of instruction, program graduates are eligible to take the examination administered by the Kentucky Board of Hairdressers and Cosmetology to become licensed cosmetology instructors.

After successful completion of the prescribed 600 hours of instruction, program graduates are eligible to take the examination administered by the Kentucky Board of Hairdressers and Cosmetology to become licensed nail technicians.

After successful completion of the prescribed 1000 hours of instruction, program graduates are eligible to take the examination administered by the Kentucky Board of Hairdressers and Cosmetology to become licensed estheticians.

Diploma

Cosmetologist - 1204014019

(Offered at ASC, BLC, BSC, GTW, HZC, JFC, SMC,WKC)

General Education:

Area 1 =			
		Written Communication, Oral Communications, or Humanities/Heritage	3
Area 2 =			
		Social/Behavioral Sciences, Natural Sciences, or Quantitative Reasoning	3
		Subtotal	**6**

NOTE: Documentation of digital literacy as defined by KCTCS is required prior to graduation.

Technical Courses:

COS	114	Cosmetology I	14
COS	116	Cosmetology II	14
COS	218	Cosmetology III	14
COS	220	Cosmetology IV	12
		Subtotal	**54**
		Total Credits	**60**

Electives:

COS	135	Individual Requirements I	1-8
COS	235	Individual Requirements II	1-8

Certificates

Cosmetologist - 1204013039

(Offered at ASC, BLC, BSC, GTW, HZC, JFC, MYC, SMC,WKC)

COS	114	Cosmetology I	14
COS	116	Cosmetology II	14
COS	218	Cosmetology III	14
COS	220	Cosmetology IV	12
		Total Credits	**54**

Electives:

COS	135	Individual Requirements I	1-8
COS	235	Individual Requirements II	1-8

Apprentice Cosmetology Instructor - 1204013019

(Offered at ASC, BSC, GTW, HZC, JFC, MYC, SMC,WKC)

COS	210	Student Teaching I	13
COS	212	Student Teaching II	13
COS	214	Student Teaching III	13
		Total Credits	**39**

OR

COS	216	Teaching I	20
COS	217	Teaching II	20
		Total Credits	**40**

Electives:

COS	135	Individual Requirements I	1-8
COS	235	Individual Requirements II	1-8

Nail Technician - 1204013029

(Offered at ASC, BSC, HZC, JFC, MYC, SMC)

COS	150	Basic Nail Tech	13
COS	152	Applied Nail Technology	13
		Total Credits	**26**

Electives:

COS	135	Individual Requirements I	1-8
COS	235	Individual Requirements II	1-8

Esthetician - 1204093019

(Offered at BLC)

COS	105	Esthetician I	14
COS	205	Esthetician II	14
COS	275	Esthetician III	13
		Total Credits	**41**

Electives

COS	135	Individual Requirements I	1-8
COS	235	Individual Requirements II	1-8

Criminal Justice

The Criminal Justice Program prepares the student for entry level work in the fields of law enforcement, corrections, court systems, loss safety and prevention, and other related occupations. The Criminal Justice vocations evolved from jobs with minimal requirements to employment positions that require complex knowledge and skills. Criminal Justice Program Curriculum provides the student with a foundation of theory, principles, and techniques employed by the criminal justice agencies. Graduates who complete an AAS Criminal Justice Degree may seek job opportunities on the federal, state, county, municipal levels of government, and private sectors of the criminal justice field.

Progression in the Criminal Justice Program is contingent upon the achievement of a grade of "C" or better in each CRJ course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale). The grading scale for criminal justice courses with a Pass/Fail scale, the grade of "P or Pass" meets the requirement for the Criminal Justice Program.

Criminal Justice Program Certificates are embedded in the Criminal Justice AAS Degree. The certificates are not stand alone certificates; therefore a student cannot receive financial aid for just a certificate. The student must be a Criminal Justice AAS Degree seeker in order to obtain program certificates.

Criminal background checks are currently not required for the Criminal Justice AAS Program; however students should understand that certain disqualifiers may hinder employment in the field of criminal justice. Such disqualifiers include, but are not limited to the following: criminal convictions, substance abuse, offensive social media activities, excessive traffic related offenses, and visible tattoos and body piercings. Students seeking employment in the criminal justice field or related field should research the requirements and disqualifiers of their desired areas or agencies of employment.

Associate in Applied Science

Criminal Justice - 4301037039

(Offered at ASC, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC,WKC)

Available Completely Online

General Education:

ENG	101	Writing I	3
ENG	102	Writing II	3
COM	181	Basic Public Speaking OR	3
COM	252	Introduction to Interpersonal Communication	(3)
		Quantitative Reasoning Course	3
		Natural Sciences Course	3
		Heritage/Humanities Course	3
POL	101	American Government OR	3
POL	255	State Government	(3)
PSY	110	General Psychology	3
SOC	101	Introduction to Sociology	3
		Elective Courses (Can be Technical or General Education Elective courses)	6
		Subtotal	**33**
		Digital Literacy OR General Education Elective (Digital Literacy must be demonstrated either by competency exam or by completing an approved digital literacy course; if student does not have to take a digital literacy class then the student must choose a general education elective for the completion of the three (3) hours).	3
		Subtotal	**3**

Technical Core Requirements:

CRJ	100	Introduction to Criminal Justice	3
CRJ	202	Issues and Ethics in Criminal Justice	3
CRJ	204	Criminal Investigations	3
CRJ	216	Criminal Law	3
CRJ	217	Criminal Procedures	3
CRJ	295	Criminal Justice Capstone	1
		Subtotal	**16**

Criminal Justice Track - 430103701

(Offered at ASC, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC,WKC)

Track Electives: (Choose 9 credit hours from the following courses)

CRJ	102	Introduction to Corrections	3
CRJ	108	Advanced Firearms and Less Than Lethal Weapons	4
CRJ	110	Principles of Asset Protection	3

CRJ	201	Introduction to Criminalistics	3
CRJ	203	Community Corrections/Probation & Parole	3
CRJ	208	Delinquency and the Juvenile Justice System	3
CRJ	210	Physical Security Technology and Systems	3
CRJ	211	Liability and Legal Issues	3
CRJ	215	Introduction to Law Enforcement	3
CRJ	218	Police Supervision	3
CRJ	219	Police Recruit Defensive Tactics	4
CRJ	220	Introduction to Computer Forensics	3
CRJ	222	Prison and Jail Administration	3
CRJ	224	Basic Traffic Collision Investigation	4
CRJ	225	Driving and Traffic Enforcement for Law Enforcement	4
CRJ	230	Criminal Justice Courtroom Procedures	3
CRJ	231	Legal Aspects of Corrections	3
CRJ	240	Introduction to Corporate and Industrial Security	3
CRJ	245	Introduction to Business and Financial Fraud	3
CRJ	277	Introduction to Criminology	3
CRJ	279	Terrorism and Political Violence	3
CRJ	290	Internship in Criminal Justice	3
CRJ	299	Selected Topics in Criminal Justice	1-3
		Subtotal	**9**
		Technical Elective	0-3
		Subtotal	**0-3**
		Total Credits	**61-64**

Law Enforcement Track - 430103702

(Offered at ASC, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC,WKC)
Available Completely Online

Required Course:

CRJ	215	Introduction to Law Enforcement	3
		Subtotal	**3**

Track Electives: (Choose 6 credit hours from the following courses)

CRJ	108	Advanced Firearms and Less Than Lethal Weapons	4
CRJ	201	Introduction to Criminalistics	3
CRJ	208	Delinquency and the Juvenile Justice System	3
CRJ	218	Police Supervision	3
CRJ	219	Police Recruit Defensive Tactics	4
CRJ	220	Introduction to Computer Forensics	3
CRJ	224	Basic Traffic Collision Investigation	4
CRJ	225	Driving and Traffic Enforcement for Law Enforcement	4
CRJ	230	Criminal Justice Courtroom Procedures	3
CRJ	277	Introduction to Criminology	3
CRJ	279	Terrorism and Political Violence	3
CRJ	290	Internship in Criminal Justice	3
CRJ	299	Selected Topics in Criminal Justice	1-3
		Subtotal	**9**
		Technical Elective	0-3
		Subtotal	**0-3**
		Total Credits	**61-64**

Corrections Track - 430103703

(Offered at ASC, BLC, ELC, GTW, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

Required:

CRJ	102	Introduction to Corrections	3
		Subtotal	**3**

Track Electives: (Choose 6 credit hours from the following courses)

CRJ	203	Community Corrections/Probation & Parole	3
CRJ	208	Delinquency and the Juvenile Justice System	3
CRJ	220	Introduction to Computer Forensics	3
CRJ	222	Prison and Jail Administration	3
CRJ	231	Legal Aspects of Corrections	3
CRJ	277	Introduction to Criminology	3
CRJ	290	Internship in Criminal Justice	3
CRJ	299	Selected Topics in Criminal Justice	1-3
		Subtotal	**9**
		Technical Elective	0-3
		Subtotal	**0-3**
		Total Credits	**61-64**

Security and Loss Prevention Track - 430103704

(Offered at ASC, BLC, ELC, GTW, HPC, HZC, JFC, MYC, OWC, SEC, SMC,WKC)
Available Completely Online

Required course:

CRJ	110	Principles of Asset Protection	3
		Subtotal	**3**

Track Electives: (Choose 6 credit hours from the following courses)

CRJ	210	Physical Security Technology and Systems	3
CRJ	211	Liability and Legal Issues	3
CRJ	220	Introduction to Computer Forensics	3
CRJ	240	Introduction to Corporate and Industrial Security	3
CRJ	245	Introduction to Business and Financial Fraud	3
CRJ	290	Internship in Criminal Justice	3
CRJ	299	Selected Topics in Criminal Justice	1-3
		Subtotal	**9**
		Technical Elective	0-3
		Subtotal	**0-3**
		Total Credits	**61-64**

NOTE: CRJ 107 Introduction to Firearms I may be used as a technical elective only. Course will not substitute for track elective.

Certificates

Computer Forensics - 4301033019

(Offered ASC, BLC, BSC, ELC, GTW, HPC, HZC, MDC, MYC, OWC, SMC,WKC)

CRJ	100	Introduction to Criminal Justice OR	3
CRJ	204	Criminal Investigations	(3)
CRJ	220	Introduction to Computer Forensics for Criminal Justice	3
CRJ	230	Criminal Justice Courtroom Procedures	3
CIT	105	Introduction to Computers	3
CIT	111	Computer Hardware and Software	4
CIT	160	Introduction to Networking Concepts OR	4
CIT	161	Introduction to Networks	(4)
CIT	180	Security Fundamentals	3
		Total	**23**

Criminal Justice Core – 4301033029

(Offered ASC, BSC, BLC, ELC, GTW, HPC, MDC, MYC, SEC, SMC,WKC)

CRJ	100	Introduction to Criminal Justice	3
CRJ	202	Issues and Ethics in Criminal Justice	3
CRJ	204	Criminal Investigations	3
CRJ	216	Criminal Law	3
CRJ	217	Criminal Procedures	3
		Total	**15**

Corrections – 4301033039

(Offered ASC, BSC, BLC, ELC, GTW, HPC, MDC, MYC, SEC, SMC,WKC)

CRJ	102	Introduction to Corrections	3
CRJ	203	Community Corrections: Probation and Parole	3
CRJ	208	Delinquency and the Juvenile Justice System	3
CRJ	222	Prison and Jail Administration	3
CRJ	231	Legal Aspects of Corrections	3
		Total	**15**

Law Enforcement – 4301033049

(Offered ASC, BSC, BLC, ELC, GTW, HPC, MDC, MYC, SEC, SMC,WKC)

CRJ	201	Introduction to Criminalistics OR	3
CRJ	204	Criminal Investigations	(3)
CRJ	208	Delinquency and Juvenile Justice System	3
CRJ	211	Liability and Legal Issues	3
CRJ	215	Introduction to Law Enforcement	3
CRJ	218	Police Supervision	3
		Total	**15**

Security and Loss Prevention – 4301033059

(Offered ASC, BSC, BLC, ELC, GTW, HPC, MYC, SEC, SMC,WKC)

CRJ	110	Principles of Asset Protection	3
CRJ	210	Physical Security Technology & Systems	3
CRJ	211	Liability and Legal Issues	3
CRJ	220	Introduction to Computer Forensics	3
CRJ	240	Introduction to Corporate Security	3
		Total	**15**

Advanced Law Enforcement – 4301033069

(Offered BSC, BLC, HPC, MDC, MYC, OWC, SEC, SMC)

CRJ	107	Introduction to Firearms	1
CRJ	108	Advanced Firearms and Less Than Lethal Weapons	4
CRJ	204	Criminal Investigations	3
CRJ	215	Introduction to Law Enforcement	3
CRJ	219	Police Recruit Defensive Tactics	4
CRJ	224	Basic Traffic Collision Investigation	4
CRJ	225	Driving and Traffic Enforcement for Law Enforcement	4
		Total	**23**

Culinary Arts

The KCTCS Culinary Arts program is designed to prepare students for careers in the Culinary Arts, Food and Beverage Management, Restaurant Management, Catering, Institutional Food Service, and as Professional Chefs. Course work covers a broad spectrum: the preparation of basic and specialized foods, catering and special event planning, international cuisine, baking and pastry arts, nutrition, sanitation, management techniques and functions, cost control, purchasing and culinary fundamentals. Students work in commercial kitchen/laboratory and dining room through the course of study. The program uses the teaching philosophy of the American Culinary Federation, the Academy of Chefs, the National Restaurant Association Education Foundation, and the American Personal Chef Association. The program competencies are those of the American Culinary Federation.

Progression in the Culinary Arts program is contingent upon achievement of a grade of "C" or better in each CUL and NFS courses.

Associate in Applied Science

Culinary Arts - 1205037029

(Offered at ASC, ELC, JFC, MYC, SKY, SMC,WKC)

General Education

	Quantitative Reasoning	3
	Natural Sciences	3
	Social/Behavioral Sciences	3
	Heritage/Humanities	3
	Written Communication.	3
	Oral Communications	3
	Required General Education Hours	**18**

Culinary Arts Technical Core

CUL	100	Introduction to Culinary Arts OR	2
CUL	105	Applied Introduction to Culinary Arts	(2)
CUL	250	Garde Manger	4
CUL	125	Sanitation and Safety	2
CUL	211	Basic Food Production	4
CUL	215	Basic Baking	4
CUL	230	Basic Nutrition OR	3
NFS	101	Human Nutrition and Wellness	(3)
CUL	240	Meats, Seafood, and Poultry	4
CUL	270	Human Relations Management	3
CUL	280	Cost and Control	3
CUL	285	Front of the House OR	3
CUL	290	Front of the House/Catering	(4)
		Digital Literacy*	0-3
		Required Technical Core Hours	32-36

* Digital Literacy must be demonstrated either by competency exam or by completing a computer/digital literacy course.

Culinary Arts Degree Track - 120503702

(Offered at ASC, ELC, JFC, MYC, SKY, SMC,WKC)

		General Education	18
		Technical Core	32-36
CUL	220	Advanced Baking and Pastry Arts	4
CUL	260	International and Classical Cuisine	4
CUL	298	Culinary Arts Practicum Experience OR	2-3
CUL	299	Culinary Arts Cooperative Education Experience	(2-3)
		Total Hours	**60-65**

Food and Beverage Management Degree Track - 120503703

(Offered at ASC, ELC, JFC, MYC, SKY, SMC,WKC)

		General Education	18
		Technical Core	32-36
BAS	160	Introduction to Business	3
BAS	170	Entrepreneurship OR	3
BAS	283	Principles of Management	(3)
BAS	282	Principles of Marketing	3
CUL	298	Culinary Arts Practicum Experience OR	2-3
CUL	299	Culinary Arts Cooperative Education Experience	(2-3)
		Total Hours	**61-66**

Catering and Personal Chef Degree Track - 120503701

(Offered at ASC, ELC, JFC, MYC, SKY, SMC,WKC)

		General Education	18
		Technical Core	32-36
CUL	220	Advanced Baking and Pastry Arts	4
BAS	170	Entrepreneurship AND	3
CUL	295	Doing Business as a Personal Chef OR	3
BAS	160	Introduction to Business AND	(3)
BAS	283	Principles of Management	(3)
CUL	298	Culinary Arts Practicum Experience OR	2-3
CUL	299	Culinary Arts Cooperative Education Experience	(2-3)
		Total Hours	**62-67**

Diplomas

Culinary Arts - 1205034029

(Offered at ASC, BSC, ELC, MYC, SKY, SMC,WKC)

General Education*

Area 1 =	Written/Oral Communications, Humanities, or Heritage	3
Area 2 =	Social/Behavioral Sciences, Natural Sciences, or Quantitative Reasoning	3
	Subtotal	**6**

* If a diploma is sought, two of the three following courses may be used for the six (6) hours general education. These courses will not count toward the AAS degree:

WPP	200	Workplace Principles (Area 2) OR	3
EFM	100	Personal Financial Management (Area 2)	(3)
TEC	200	Technical Communications (Area 1)	3

Technical or Support Courses

		Technical Core	32-36
CUL	220	Advanced Baking and Pastry Arts	4
CUL	260	International and Classical Cuisine	4
CUL	298	Culinary Arts Practicum Experience OR	2-3
CUL	299	Culinary Arts Cooperative Education Experience	(2-3)
		Technical/ Support Total	**42-47**
		Total Hours for Culinary Arts Diploma	**48-53**

Food and Beverage Management - 1205034039

(Offered at ASC, BSC, ELC, MYC, SKY, SMC,WKC)

General Education*

Area 1 =		Written/Oral Communications, Humanities, or Heritage	3
Area 2 =		Social/Behavioral Sciences, Natural Sciences, or Quantitative Reasoning	3
		Subtotal	**6**

* If a diploma is sought, two of the three following courses may be used for the six (6) hours general education. These courses will not count toward the AAS degree:

WPP	200	Workplace Principles (Area 2) OR	3
EFM	100	Personal Financial Management (Area 2)	(3)
TEC	200	Technical Communications (Area 1)	3

Technical or Support Courses

		Technical Core	32-36
BAS	160	Introduction to Business	3
BAS	170	Entrepreneurship OR	3
BAS	283	Principles of Management	(3)
BAS	282	Principles of Marketing	3
CUL	298	Culinary Arts Practicum Experience OR	2-3
CUL	299	Culinary Arts Cooperative Education Experience	(2-3)
		Technical/Support Total	**43-48**
		Total Hours	**49-54**

Catering and Personal Chef - 1205034019

(Offered at ASC, BSC, ELC, MYC, SKY, SMC,WKC)

General Education*

Area 1 =		Written/Oral Communications, Humanities, or Heritage	3
Area 2 =		Social/Behavioral Sciences, Natural Sciences, or Quantitative Reasoning	3
		Subtotal	**6**

* If a diploma is sought, two of the three following courses may be used for the six (6) hours general education. These courses will not count toward the AAS degree:

WPP	200	Workplace Principles (Area 2) OR	3
EFM	100	Personal Financial Management (Area 2)	(3)
TEC	200	Technical Communications (Area 1)	3

Technical or Support Courses

		Technical Core	32-36
CUL	220	Advanced Baking and Pastry Arts	4
BAS	170	Entrepreneurship AND	3
CUL	295	Doing Business as a Personal Chef OR	3
BAS	160	Introduction to Business AND	(3)
BAS	283	Principles of Management	(3)
CUL	298	Practicum Experience OR	2-3
CUL	299	Cooperative Education	(2-3)
		Technical Support Total	44-49
		Total Hours	**50-55**

Certificates

Fundamentals of Culinary Arts - 1205033029

(Offered at ASC, BSC, ELC, JFC, MYC, OWC, SKY, SMC,WKC)

CUL	100	Introduction to Culinary Arts OR	2
CUL	105	Applied Introduction to Culinary Arts	(2)
CUL	250	Garde Manger	4
CUL	125	Sanitation and Safety	2
CUL	211	Basic Food Production	4
CUL	215	Basic Baking	4
		Total Hours	**16**

Catering - 1205033059

(Offered at ASC, BSC, ELC, JFC, MYC, OWC, SKY, SMC,WKC)

CUL	100	Introduction to Culinary Arts OR	2
CUL	105	Applied Introduction to Culinary Arts	(2)
CUL	250	Garde Manger	4
CUL	125	Sanitation and Safety	2
CUL	215	Basic Baking	4
CUL	290	Front of the House/Catering	4
		Total Hours	**16**

Advanced Catering - 1205033079

(Offered at ASC, BSC, ELC, JFC, MYC, OWC, SKY, SMC,WKC)

		Catering Certificate	16
CUL	211	Basic Food Production	4
CUL	220	Advanced Baking and Pastry Arts	4
CUL	240	Meats, Seafood, Poultry	4
CUL	260	International and Classical Cuisine	4
CUL	270	Human Relations Management	3
CUL	280	Cost and Control	3
BAS	170	Entrepreneurship OR	3
BAS	160	Introduction to Business AND	(3)
BAS	283	Principles of Management	(3)
		Total Hours	**41-44**

Culinary Arts - 1205033049

(Offered at ASC, ELC, MYC, OWC, SKY, SMC,WKC)

		Culinary Arts Technical Core	32-36
		Total Hours	**32-36**

Advanced Culinary Arts - 1205033069

(Offered at ASC, BSC, ELC, JFC, MYC, OWC, SKY, SMC,WKC)

		Culinary Arts Technical Core	32-36
		Culinary Arts Degree Track Courses	10-11
		Total Hours	**42-47**

Food and Beverage Management - 1205033039

(Offered at ASC, BSC, ELC, JFC, MYC, OWC, SKY, SMC,WKC)

CUL	100	Introduction to Culinary Arts OR	2
CUL	105	Applied Fundamentals of the Culinary Arts Profession	(2)
CUL	125	Sanitation and Safety	2
CUL	211	Basic Food Production	4
CUL	215	Basic Baking	4
CUL	240	Meats, Seafood, and Poultry	4
CUL	270	Human Relations Management OR	3
CUL	280	Cost and Control	3
BAS	160	Introduction to Business	3
BAS	282	Principles of Marketing	3
BAS	283	Principles of Management	3
		Digital Literacy*	0-3
		Total Hours	**31-34**

Digital Literacy must be demonstrated either by competency exam or by completing a computer/digital literacy course.

Advanced Food and Beverage Management - 1205033089

(Offered at ASC, BSC, ELC, JFC, MYC, OWC, SKY, SMC,WKC)

CUL	100	Introduction to Culinary Arts OR	2
CUL	105	Applied Fundamentals of the Culinary Arts Profession	(2)
CUL	250	Garde Manger	4
CUL	125	Sanitation and Safety	2
CUL	211	Basic Food Production	4
CUL	215	Basic Baking	4
CUL	230	Basic Nutrition OR	3
NFS	101	Human Nutrition and Wellness	(3)
CUL	240	Meats, Seafood, and Poultry	4
CUL	270	Human Relations Management	3
CUL	280	Cost and Control	3
CUL	285	Front of the House OR	(3)
CUL	290	Front of the House/Catering	4
BAS	160	Introduction to Business	3
BAS	170	Entrepreneurship OR	3
BAS	283	Principles of Management	(3)
BAS	282	Principles of Marketing	3
CUL	298	Culinary Arts Practicum Experience OR	2-3
CUL	299	Culinary Arts Cooperative Education Experience	(2-3)
		Total Hours	**43-45**

Culinary Arts Professional Development - 1205033099

(Offered at SKY, SMC,WKC)

CUL		Students may choose 12 credit hours from any Culinary Arts courses*	
		Total Hours	**12**

*Prerequisites apply

Baking-1205033109

(Offered at ASC, MYC, SKY, SMC,WKC)

CUL	100	Introduction to Culinary Arts…OR	2
CUL	105	Applied Introduction to Culinary Arts	(2)
CUL	125	Sanitation and Safety	2
CUL	215	Basic Baking	4
CUL	220	Advanced Baking	4
		Total Hours	**12**

Dental Hygiene

This program prepares students to function as dental hygienists on a dental team under the general supervision of a dentist. The curriculum includes courses in general education and in dental hygiene as required by the Commission on Dental Accreditation and Kentucky state dental practice act. The program provides comprehensive educational experiences through lectures, clinical and related study in order that students may apply scientific knowledge in the performance of dental hygiene procedures. Students enrolled in the Dental Hygiene program must achieve a minimum grade of "C" in each Dental Hygiene and approved science course. Documentation of computer literacy as defined by KCTCS and Cardiopulmonary resuscitation (CPR) are required prior to admission to DHP courses.

Associate in Applied Science

Dental Hygiene - 5106027019

(Offered at BLC)

General Education Core

BIO	137	Human Anatomy & Physiology I*	4
BIO	139	Human Anatomy & Physiology I*	4
BIO	226	Principles of Microbiology	3
PSY	110	General Psychology	3
SOC	101	Introduction to Sociology	3
		Heritage/Humanities	3
		Quantitative Reasoning	3
		Written Communication	3
		Oral Communications	3
		Subtotal Credits	**29**

Technical Courses

DHP	120	Dental Hygiene I**	4
DHP	121	Oral Biology I	3
DHP	122	Dental Nutrition	2
DHP	130	Dental Hygiene II	3
DHP	131	Oral Biology II	5
DHP	135	Dental Radiology	3
DHP	136	Periodontics I	2
DHP	220	Dental Hygiene III	3
DHP	222	Special Needs Patients	3
DHP	224	Dental Materials	2
DHP	226	Periodontics II	2
DHP	230	Dental Hygiene IV	3
DHP	235	Principles of Practice	1
DHP	238	Community Dental Health	3
		Subtotal Credits	**39**
		Total Program Credits	**68**

Recommended Electives (Not Required)

DHP	229	Local Anesthesia	(2)
DHP	299	Independent Study Dental Hygiene	(1-4)
ENG	102	Writing II	(3)
NFS	101	Human Nutrition and Wellness	(3)

*The Dental Hygiene Program at BCTC requires that BIO 137 & BIO 139 or their equivalents be successfully completed with a grade of C or higher prior to beginning DHP 120.

**Documentation of computer/digital literacy as defined by KCTCS is required prior to admission to DHP courses. CPR certification for the healthcare provider must be obtained prior to enrolling in DHP 120 and certification must be kept current throughout the Program

Dental Assisting/Dental Hygiene Integrated Program

The Dental Assisting/Dental Hygiene Integrated Program prepares graduates to function as dental auxiliaries.

The Dental Assisting program prepares the student to function as a dental assistant under the supervision of a dentist. As a member of the dental health team, the dental assistant is responsible for providing such services as assisting the dentist with operative and surgical procedures, manipulation of dental materials, taking radiographs, providing oral health instructions and performing office management tasks.

Dental Assisting students will be awarded a Diploma in Dental Assisting and will be eligible to take the Dental Assisting National Board (DANB). Graduates will also be certified in radiation health and safety, coronal polishing and expanded duties (lab competency). The dental assisting curriculum includes courses in general education as well as dental assisting as required by the Commission on Dental Accreditation. The program provides comprehensive educational experiences through lectures, clinical externship rotations, laboratory and related study. Students must achieve a minimum grade of "C" in each Dental Assisting (DAS) course, Dental Assisting/Hygiene (DAH) course, and approved science courses.

The Dental Hygiene Program prepares the student to function as a dental hygienist on a dental auxiliary team under the supervision of a dentist. The curriculum includes content areas in general studies, biomedical sciences, dental sciences, clinical sciences, radiography, periodontology, and dental hygiene clinical experience. The program provides comprehensive

educational experiences through lectures, clinical, and related study in order that graduates may apply scientific knowledge in the performance of dental hygiene procedures. Students must achieve a minimum grade of "C" in each Dental Hygiene (DHG) course, Dental Assisting/Hygiene (DAH) course, and approved science courses. Upon completion, graduates are eligible to apply to take the Dental Hygiene National Board Examination. As the only licensed dental auxiliaries, dental hygienists may be employed in dental offices, clinics, dental schools, public health and government agencies.

The programs are accredited by the Commission on Dental Accreditation, a specialized accrediting body of the American Dental Association. The commission is nationally recognized by the U.S. Department of Education to accredit dental and dental related educational programs at the post-secondary level.

Associate in Applied Science

Dental Hygiene - 5106027040

(Offered in West Consortium – Credential granted by Henderson CC but also taught at West KY CTC)
(Offered in East Consortium – Credential granted by Big Sandy CTC but also taught at Somerset CC)

General Education Classes:

ENG	101	Writing I	3
ENG	102	Writing II	3
BIO	137	Human Anatomy & Physiology I	4
BIO	139	Human Anatomy & Physiology II	4
BIO	225	Medical Microbiology	4
PSY	110	General Psychology	3
SOC	101	Introductory Sociology	3
MAT	110	Applied Mathematics OR	3
MAT	150	College Algebra and Functions	(3)
		Oral Communications	3
		Heritage/Humanities	3
		Subtotal	**33**

Integrated Classes:

DAH	101	Infection Control and Medical Emergencies	2
DAH	121	Dental Sciences	3
DAH	124	Materials in Dentistry	2
DAH	131	Oral Pathology	3
DAH	135	Oral Radiology	2
DAH	235	Practice Management	1
		Subtotal	**13**

Dental Hygiene Only Classes:

DHG	120	Pre-Clinical Dental Hygiene	3
DHG	130	Clinical Dental Hygiene I	3
DHG	132	Pharmacology	2
DHG	134	Dental Nutrition	2
DHG	136	Periodontology	1
DHG	220	Clinical Dental Hygiene II	4
DHG	226	Advanced Periodontology	2
DHG	230	Clinical Dental Hygiene III	3
DHG	238	Community Dental Health Issues	2
		Subtotal	**22**
		Total Credit Hours	**68**

Elective

DHG	221	Local Anesthesia and Nitrous Oxide Sedation	2

Diploma

Dental Assisting - 5106024019

(Offered in West Consortium – Credential granted by Ashland CTC, Big Sandy CTC, West KY CTC but also taught at Henderson CC)

General Education Classes:

Program Related Classes

BIO	135	Basic Anatomy & Physiology with Laboratory OR	4
BIO	137	Human Anatomy & Physiology I AND	(4)
BIO	139	Human Anatomy & Physiology II	(4)
		Three credits from Written Communication, Oral Communications, or Heritage/Humanities	3
PSY	110	General Psychology *	(3)

*Required at Bluegrass CTC, recommended at West Kentucky CTC

	Subtotal	**7-14**

Integrated Classes

DAH	101	Infection Control and Medical Emergencies	2
DAH	121	Dental Sciences	3
DAH	124	Materials in Dentistry	2
DAH	131	Oral Pathology	3
DAH	135	Oral Radiology	2
DAH	235	Practice Management	1
		Subtotal	**13**

Dental Assisting Only Classes

DAS	125	Dental Assisting I	6
DAS	130	Seminar I	2
DAS	225	Dental Assisting II	2
DAS	230	Seminar II	1
DAS	245	Preventive Dentistry	2
DAS	250	Clinical Externship	5
		Subtotal	**18**
		Total Credit Hours	**38-45**

Diagnostic Medical Sonography

Diagnostic Medical Sonography is a highly-skilled profession which uses specialized equipment to create images of structures inside the human body used by physicians to make medical diagnoses. Graduates of the program are qualified to provide patient services using diagnostic techniques under the supervision of a licensed physician.

This program contains four tracks, the general/vascular track, the general track, the vascular track and the cardiac track. The general/vascular track prepares the graduate to be a general sonographer who is qualified to perform vascular ultrasound. Sonographers have extensive, direct patient contact that may include performing some invasive procedures. The general track prepares the graduate to perform sonograms on the abdominal, small parts and OB/GYN applications. The vascular track prepares the graduate to perform sonograms on the cerbrovascular, peripheral arterial, peripheral venous and abdominal vascular applications. The cardiac track prepares the graduate to perform cardiovascular sonograms.

Sectional anatomy, ultrasonic instrumentation and imaging are the major components in this program. Skills are developed through clinical experiences using diagnostic imagery equipment.

An advanced option (certificate) in vascular sonography is offered for candidates who are currently employed and registry eligible in Diagnostic Medical Sonography.

The student is exposed to and expected to acquire skills, attitudes, and habits that are generally common to all professionals in the medical field.

Graduates will be prepared for a professional career in the opted sonography field.

CPR requirement must be successfully completed prior to enrolling in the first sonography course and must be kept current throughout the program. Documentation of successful completion of a minimum 75 hour nursing assistant course or its equivalent and digital literacy competency as defined by KCTCS are required prior to enrolling in the first sonography course.

Progression in the Diagnostic Medical Sonography program is contingent upon achievement of a grade of "C" or better in each Sonography course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

Transportation to the community agencies is the responsibility of each student.

Note: Hours Exception (67-76 for the A.A.S) approved by the KCTCS Board of Regents in June 2010.

Associate in Applied Science

Diagnostic Medical Sonography - 5109107019

(Offered at HZC, SKY,WKC)

General Education:

MAT	150	College Algebra	3
ENG	101	Writing I	3
		Heritage/Humanities	3
		Social/Behavioral Sciences	3
BIO	137	Human Anatomy and Physiology I AND	4
BIO	139	Human Anatomy and Physiology II OR	4
BIO	135	Basic Anatomy and Physiology with Laboratory	(4)
PHY	151	Introductory Physics I OR	3
PHY	152	Introductory Physics II OR	(3)
PHY	171	Applied Physics	(4)
		Subtotal	**19-24**

General/Vascular Sonography Track – 510910705

(Offered at HZC,WKC)

AHS	120	Medical Terminology	1
DMS	109	Sonography I	7
DMS	115	Sonography II	6
DMS	119	Ultrasonic Physics and Instrumentation	6
DMS	199	Online Physics Review AND/OR	1
DMS	201	Online Abdomen Review AND/OR	(1)
DMS	202	Online OB/GYN Review	(1)
DMS	255	Vascular Technology	6
DMS	260	Vascular Clinical Education	6

A total of 17 credit hours must be completed from the following clinical courses: 17

DMS	126	Clinical Education I	(3-4)
DMS	230	Clinical Education II	(5-8)
DMS	240	Clinical Education III	(5-8)
		Subtotal	**50-52**
		Total	**69-76**

General SonographyTrack - 510910706

(Offered at HZC, SKY,WKC)

AHS	120	Medical Terminology	1
NAA	100	Nursing Assistant Skills OR	3
HST	101	Basic Skills I	(3)
DMS	111	Abdominal Sonography	7
DMS	116	OB/GYN Sonography	6
DMS	121	Sonography Physics and Instrumentation	6
DMS	199	Online Physics Review	1
DMS	201	Online Abdomen Review	1
DMS	202	Online OB/GYN Review	1

A total of 17 credit hours must be completed from the following clinical courses: 17

DMS	126	Clinical Education I	(3-4)
DMS	230	Clinical Education II	(5-8)
DMS	240	Clinical Education III	(5-8)
		Subtotal	**43**
		Total	**62-67**

Vascular Sonography Track – 510910707

AHS	120	Medical Terminology	1
DMS	117	Vascular Sonography I	7
DMS	118	Vascular Sonography II	6
DMS	121	Sonography Physics and Instrumentation	6
DMS	136	Vascular Clinical Education I	4
DMS	199	Online Physics Review	1
DMS	204	Online Vascular Review	2
DMS	206	Online Vascular Sonography III	3
DMS	236	Vascular Clinical Education II	8
DMS	237	Vascular Clinical Education III	5
		Subtotal	**43**
		Total	**62-67**

Cardiac Sonography Track – 510910708

AHS	120	Medical Terminology	1
DMS	105	Introduction to Cardiology	13
DMS	145	Cardiac Sonography I	12
DMS	205	Cardiac Sonography II	6
DMS	215	Cardiac Sonography III	6
DMS	245	Cardiac Sonography IV	6
		Subtotal	**44**
		Total	**63-68**

Certificates

Basic Vascular Sonography Technology – 5109103069

(Offered at SKY)

DMS	280	Basic Vascular Technology	3
		Total	**3**

Cardiac Sonography – 5109103079

DMS	105	Introduction to Cardiology	13
DMS	145	Cardiac Sonography I	12
DMS	205	Cardiac Sonography II	6
DMS	215	Cardiac Sonography III	6
DMS	245	Cardiac Sonography IV	6
		Total	**43**

General Sonography -5109103089

DMS	111	Abdominal Sonography	7
DMS	116	OB/GYN Sonography	6
DMS	121	Sonography Physics and Instrumentation	6
DMS	199	Online Physics Review	1
DMS	201	Online Abdomen Review	1
DMS	202	Online OB/GYN Review	1

A total of 17 credit hours must be completed from the following clinical courses: 17

DMS	126	Clinical Education I	(3-4)
DMS	230	Clinical Education II	(5-8)
DMS	240	Clinical Education III	(5-8)
		Total	**39**

Vascular Sonography– 5109103099

DMS	117	Vascular Sonography I	7
DMS	118	Vascular Sonography II	6
DMS	121	Sonography Physics and Instrumentation	6
DMS	136	Vascular Clinical Education I	4
DMS	199	Online Physics Review AND	1
DMS	204	Online Vascular Review	2
DMS	206	Online Vascular Sonography III	3
DMS	236	Vascular Clinical Education II	8
DMS	237	Vascular Clinical Education III	5
		Total	**42**

Basic Cardiac Ultrasound Technology - 5109103059

(Offered at SKY)

DMS	217	Basic Cardiac Ultrasound Technology	3
		Total	**3**

Diesel Technology

Emphasizes the skills needed to analyze malfunctions and repair, rebuild and maintain construction equipment, agriculture equipment, or medium and heavy trucks in this program of study. Provides instruction and experience in systems such as diesel engines, fuel injection, onboard computers, transmissions, steering and suspension, and brakes.

A student must receive a grade of "C" or better to receive credit for successful completion of courses in the diesel technology curriculum.

Associate in Applied Science

Diesel Technology - 4706057039

(Offered at ELC, HPC, OWC, SEC)

General Education:

		Written Communication	3
		Quantitative Reasoning	3
		Natural Sciences	3
		Social/Behavioral Sciences	3
		Heritage/Humanities	3
		Subtotal	**15**

Technical Core:

		Computer/Digital Literacy	3
BEX	100	Basic Electricity for Non-Majors AND	3
BEX	101	Basic Electricity Lab for Non-Majors OR	2
ADX	120	Basic Automotive Electricity AND	(3)
ADX	121	Basic Automotive Electricity Lab OR	(2)
ELT	110	Circuits I	(5)
ADX	170	Climate Control	3
ADX	171	Climate Control Lab	1
DIT	103	Preventive Maintenance Lab	2
DIT	110	Introduction to Diesel Engines AND	3
DIT	111	Introduction to Diesel Engines Lab OR	2
ADX	150	Engine Repair AND	(3)
ADX	151	Engine Repair Lab	(2)
DIT	112	Diesel Engine Repair	3
DIT	113	Diesel Engine Repair Lab	2
DIT	140	Hydraulics AND	3
DIT	141	Hydraulics Lab OR	2
FPX	100	Fluid Power AND	(3)
FPX	101	Fluid Power Lab	(2)
DIT	150	Power Trains	3
DIT	151	Power Trains Lab	2
DIT	190	Electrical Systems for Diesel Equipment AND	3
DIT	191	Electrical Systems for Diesel Equipment Lab OR	2
ADX	260	Electrical Systems AND	(3)
ADX	261	Electrical Systems Lab	(2)
		Subtotal	**39**

NOTE: Computer/Digital Literacy must be demonstrated either by competency exam or by completing a computer/digital literacy course. If demonstrated by a competency exam, an additional three credit hour class must be taken.

Agriculture Diesel Technician Track - 470605701

(Offered at HPC, OWC, SEC)

DIT	152	Powertrain for Construction Equipment	3
DIT	153	Powertrain for Construction Equipment Lab	2
DIT	121	Introduction to Maintenance Welding Lab OR	3
IMT	100	Welding for Maintenance AND	(3)
IMT	101	Welding for Maintenance Lab OR	(2)
WLD	120	Shielded Metal Arc Welding (SMAW) AND	(3)
WLD	121	Shielded Metal Arc Welding (SMAW) Lab	(2)
		Subtotal	**8-10**
		Total	**62-64**

Construction Equipment Technician Track - 470605702

(Offered at OWC, SEC)

DIT	121	Introduction to Maintenance Welding Lab OR	3
IMT	100	Welding for Maintenance AND	(3)
IMT	101	Welding for Maintenance Lab OR	(2)
WLD	120	Shielded Metal Arc Welding (SMAW) AND	(3)
WLD	121	Shielded Metal Arc Welding (SMAW) Lab	(2)
DIT	123	Undercarriage Lab	3
DIT	152	Powertrain for Construction Equipment	3
DIT	153	Powertrain for Construction Equipment Lab	2
		Subtotal	**11-13**
		Total	**65-67**

Medium and Heavy Truck Technician Track - 470605703

(Offered at ELC, OWC, SEC)

DIT	180	Brakes	3
DIT	181	Brakes Lab	2
DIT	160	Steering and Suspension	3
DIT	161	Steering and Suspension Lab	2
		Subtotal	**10**
		Total	**64**

Recommended Technical Electives (Program Coordinator Approval required)

DIT	180	Brakes	3
DIT	181	Brakes Lab	2
DIT	160	Steering and Suspension	3
DIT	161	Steering and Suspension Lab	2
DIT	121	Introduction to Maintenance Welding Lab OR	3
IMT	100	Welding for Maintenance AND	(3)
IMT	101	Welding for Maintenance Lab OR	(2)
WLD	120	Shielded Metal Arc Welding (SMAW) AND	(3)
WLD	121	Shielded Metal Arc Welding (SMAW) Lab	(2)
DIT	123	Undercarriage Lab	3
DIT	152	Powertrain for Construction Equipment	3
DIT	153	Powertrain for Construction Equipment Lab	2
DIT	105	Mechanical Concepts OR	1
PMX	100	Precision Measurement	(3)
DIT	193	Special Problems I	1
DIT	195	Special Problems II	2
DIT	197	Special Problems III	3
DIT	198	Practicum	1
DIT	298	Practicum II	2
DIT	199	Cooperative Education	1
DIT	299	Cooperative Education II	2

(Or other courses as approved by the Program Coordinator that will prepare the student for entry into the workforce)

Diplomas

Agriculture Equipment Technician - 4706054039

(Offered at ASC, BSC, HPC, MYC, OWC, SEC, SMC,WKC)

General Education

Area 1 =		Written Communication, Oral Communications, or Humanities/Heritage	3
Area 2 =		Social /Behavioral Science, Natural Sciences or Quantitative Reasoning	3
		Subtotal	**6**

Technical Courses

		Computer/Digital Literacy course OR demonstrated competency	0-3
ADX	170	Climate Control	3
ADX	171	Climate Control Lab	1
BEX	100	Basic Electricity for Non-Majors AND	3
BEX	101	Basic Electricity Lab for Non-Majors OR	2
ADX	120	Basic Automotive Electricity AND	(3)
ADX	121	Basic Automotive Electricity Lab OR	(2)
ELT	110	Circuits I	(5)
DIT	103	Preventive Maintenance Lab	2
DIT	110	Introduction to Diesel Engines AND	3
DIT	111	Introduction to Diesel Engines Lab OR	2
ADX	150	Engine Repair AND	(3)
ADX	151	Engine Repair Lab	(2)
DIT	112	Diesel Engine Repair	3
DIT	113	Diesel Engine Repair Lab	2
DIT	121	Introduction to Maintenance Welding Lab OR	3
IMT	100	Welding for Maintenance AND	(3)
IMT	101	Welding for Maintenance Lab OR	(2)
WLD	120	Shielded Metal Arc Welding (SMAW) AND	(3)
WLD	121	Shielded Metal Arc Welding (SMAW) Lab	(2)
DIT	140	Hydraulics AND	3
DIT	141	Hydraulics Lab OR	2
FPX	100	Fluid Power AND	(3)
FPX	101	Fluid Power Lab	(2)
DIT	150	Power Trains	3
DIT	151	Power Trains Lab	2
DIT	152	Powertrain for Construction Equipment	3
DIT	153	Powertrain for Construction Equipment Lab	2
DIT	190	Electrical Systems for Diesel Equipment AND	3
DIT	191	Electrical Systems for Diesel Equipment Lab OR	2
ADX	260	Electrical Systems AND	(3)
ADX	261	Electrical Systems Lab	(2)
		Subtotal	**44-49**
		Total	**50-55**

Construction Equipment Technician - 4706054019

(Offered at ASC, BSC, HZC, MYC, OWC, SEC,WKC)

General Education

Area 1 =		Written Communication, Oral Communications, or Humanities/Heritage	3
Area 2 =		Social/Behavioral Sciences, Natural Sciences or Quantitative Reasoning	3
		Subtotal	**6**

Technical Courses

		Computer/Digital Literacy course OR demonstrated competency	0-3
ADX	170	Climate Control	3
ADX	171	Climate Control Lab	1
BEX	100	Basic Electricity for Non-Majors AND	3
BEX	101	Basic Electricity Lab for Non-Majors OR	2
ADX	120	Basic Automotive Electricity AND	(3)
ADX	121	Basic Automotive Electricity Lab OR	(2)
ELT	110	Circuits I	(5)
DIT	103	Preventive Maintenance Lab	2
DIT	110	Introduction to Diesel Engines AND	3
DIT	111	Introduction to Diesel Engines Lab OR	2
ADX	150	Engine Repair AND	(3)
ADX	151	Engine Repair Lab	(2)
DIT	112	Diesel Engine Repair	3
DIT	113	Diesel Engine Repair Lab	2
DIT	121	Introduction to Maintenance Welding Lab OR	3
IMT	100	Welding for Maintenance AND	(3)
IMT	101	Welding for Maintenance Lab OR	(2)
WLD	120	Shielded Metal Arc Welding (SMAW) AND	(3)
WLD	121	Shielded Metal Arc Welding (SMAW) Lab	(2)
DIT	123	Undercarriage Lab	3
DIT	140	Hydraulics AND	3
DIT	141	Hydraulics Lab OR	2
FPX	100	Fluid Power AND	(3)
FPX	101	Fluid Power Lab	(2)
DIT	190	Electrical Systems for Diesel Equipment AND	3
DIT	191	Electrical Systems for Diesel Equipment Lab OR	2
ADX	260	Electrical Systems AND	(3)
ADX	261	Electrical Systems Lab	(2)
		Subtotal	**47-52**
		Total	**53-58**

Medium and Heavy Truck Technician - 4706054049

(Offered at ASC, BSC, ELC, GTW, HZC, MYC, OWC, SEC, SMC,WKC)

General Education

Area 1 =		Written Communication, Oral Communications, or Humanities/Heritage	3
Area 2 =		Social/Behavioral Sciences, Natural Sciences or Quantitative Reasoning	3
		Subtotal	**6**

Technical Courses

		Computer/Digital Literacy course OR demonstrated competency	0-3
ADX	170	Climate Control	3
ADX	171	Climate Control Lab	1
BEX	100	Basic Electricity for Non-Majors AND	3
BEX	101	Basic Electricity Lab for Non-Majors OR	2
ADX	120	Basic Automotive Electricity AND	(3)
ADX	121	Basic Automotive Electricity Lab OR	(2)
ELT	110	Circuits I	(5)
DIT	103	Preventive Maintenance Lab	2
DIT	110	Introduction to Diesel Engines AND	3
DIT	111	Introduction to Diesel Engines Lab OR	2
ADX	150	Engine Repair AND	(3)
ADX	151	Engine Repair Lab	(2)
DIT	112	Diesel Engine Repair	3
DIT	113	Diesel Engine Repair Lab	2
DIT	140	Hydraulics AND	3
DIT	141	Hydraulics Lab OR	2
FPX	100	Fluid Power AND	(3)
FPX	101	Fluid Power Lab	(2)
DIT	150	Power Trains	3
DIT	151	Power Trains Lab	2
DIT	160	Steering and Suspension	3
DIT	161	Steering and Suspension Lab	2
DIT	180	Brakes	3
DIT	181	Brakes Lab	2
DIT	190	Electrical Systems for Diesel Equipment AND	3
DIT	191	Electrical Systems for Diesel Equipment Lab OR	2
ADX	260	Electrical Systems AND	(3)
ADX	261	Electrical Systems Lab	(2)
		Subtotal	**46-49**
		Total	**52-55**

Recommended Technical Electives (Program Coordinator Approval required)

DIT	180	Brakes	3
DIT	181	Brakes Lab	2
DIT	160	Steering and Suspension	3
DIT	161	Steering and Suspension Lab	2
DIT	121	Introduction to Maintenance Welding Lab OR	3
IMT	100	Welding for Maintenance AND	(3)
IMT	101	Welding for Maintenance Lab OR	(2)
WLD	120	Shielded Metal Arc Welding (SMAW) AND	(3)
WLD	121	Shielded Metal Arc Welding (SMAW) Lab	(2)
DIT	123	Undercarriage Lab	3
DIT	152	Powertrain for Construction Equipment	3
DIT	153	Powertrain for Construction Equipment Lab	2
DIT	105	Mechanical Concepts OR	1
PMX	100	Precision Measurement	(3)
DIT	193	Special Problems I	1
DIT	195	Special Problems II	2
DIT	197	Special Problems III	3
DIT	198	Practicum	1
DIT	298	Practicum II	2
DIT	199	Cooperative Education	1
DIT	299	Cooperative Education II	
		(Or other courses as approved by the Program Coordinator that will prepare the student for entry into the workforce)	

Certificate

Agriculture Equipment Mechanic Helper - 4706053109

(Offered at ASC, BSC, HPC, MYC, OWC, SEC, SMC,WKC)

ADX	150	Engine Repair AND	3
ADX	151	Engine Repair Lab OR	2
DIT	110	Introduction to Diesel Engines AND	(3)
DIT	111	Introduction to Diesel Engines Lab	(2)
ADX	260	Electrical Systems AND	3
ADX	261	Electrical Systems Lab OR	2
DIT	190	Electrical Systems for Diesel Equipment AND	(3)
DIT	191	Electrical Systems for Diesel Equipment Lab	(2)
DIT	112	Diesel Engine Repair	3
DIT	113	Diesel Engine Repair Lab	2
DIT	152	Powertrain for Construction Equipment	3
DIT	153	Powertrain for Construction Equipment Lab	2
		Total	**20**

Construction Equipment Mechanic Helper - 4706053019

(Offered at ASC, BSC, HZC, MYC, OWC, SEC,WKC)

ADX	150	Engine Repair AND	3
ADX	151	Engine Repair Lab OR	2
DIT	110	Introduction to Diesel Engines AND	(3)
DIT	111	Introduction to Diesel Engines Lab	(2)
ADX	260	Electrical Systems AND	3
ADX	261	Electrical Systems Lab OR	2
DIT	190	Electrical Systems for Diesel Equipment AND	(3)
DIT	191	Electrical Systems for Diesel Equipment Lab	(2)
DIT	112	Diesel Engine Repair	3
DIT	113	Diesel Engine Repair Lab	2
DIT	152	Powertrain for Construction Equipment	3
DIT	153	Powertrain for Construction Equipment Lab	2
DIT	123	Undercarriage Lab	3
		Total	**23**

Diesel Engine Mechanic - 4706053079

(Offered at ASC, BSC, ELC, GTW, HZC, HPC, MYC, OWC, SEC, SMC,WKC)

DIT	110	Introduction to Diesel Engines AND	3
DIT	111	Introduction to Diesel Engines Lab OR	2
ADX	150	Engine Repair AND	(3)
ADX	151	Engine Repair Lab	(2)
DIT	112	Diesel Engine Repair	3
DIT	113	Diesel Engine Repair Lab	2
		Electives (Diesel Courses/Industrial Education Core)	2
		Total	**12**

Diesel Mechanics Assistant - 4706053189

(Offered at BSC, ELC, HZC, MYC, OWC, SEC, SMC,WKC)

DIT	103	Preventive Maintenance Lab	2
DIT	110	Introduction to Diesel Engines	3
DIT	111	Introduction to Diesel Engines Lab	2
DIT	112	Diesel Engine Repair	3
DIT	113	Diesel Engine Repair Lab	2
DIT	160	Steering and Suspension	3
DIT	161	Steering and Suspension Lab	2
DIT	180	Brakes	3
DIT	181	Brakes Lab	2
DIT	190	Electrical Systems for Diesel Equipment	3
DIT	191	Electrical Systems for Diesel Equipment Lab	2
		Total	**27**

Diesel Steering & Suspension Mechanic - 4706053179

(Offered at ASC, BSC, ELC, HZC, MYC, OWC, SEC, SMC,WKC)

DIT	160	Steering and Suspension	3
DIT	161	Steering and Suspension Lab	2
		Electives (Diesel Courses/Industrial Education Core)	7
		Total	**12**

Electrical/Electronics Systems Mechanic - 4706053059

(Offered at ASC, BSC, ELC, GTW, HZC, HPC, MYC, OWC, SEC, SMC,WKC)

BEX	100	Basic Electricity for Non-Majors AND	3
BEX	101	Basic Electricity Lab for Non-Majors OR	2
ADX	120	Basic Automotive Electricity AND	(3)
ADX	121	Basic Automotive Electricity Lab OR	(2)
ENGT	110	Circuits I	(5)
DIT	190	Electrical Systems for Diesel Equipment AND	3
DIT	191	Electrical Systems for Diesel Equipment Lab OR	2
ADX	260	Electrical Systems AND	(3)
ADX	261	Electrical Systems Lab	(2)
		Electives (Diesel Courses/Industrial Education Core)	2
		Total	**12**

Fluid Power Mechanic - 4706053119

(Offered at ASC, BSC, ELC, HZC, HPC, MYC, OWC, SEC, SMC,WKC)

FPX	100	Fluid Power OR	3
DIT	140	Hydraulics	(3)
FPX	101	Fluid Power Lab OR	2
DIT	141	Hydraulics Lab	(2)
		Electives (Diesel Courses/Industrial Education Core)	7
		Total	**12**

Heavy Duty Brake Mechanic - 4706053039

(Offered at ASC, BSC, ELC, HZC, HPC, MYC, OWC, SEC, SMC,WKC)

DIT	180	Brakes	3
DIT	181	Brakes Lab	2
		Electives (Diesel Courses/Industrial Education Core)	7
		Total	**12**

Heavy Duty Drive Train Mechanic - 4706053089

(Offered at ASC, BSC, ELC, HZC, MYC, OWC, SEC, SMC,WKC)

DIT	150	Power Trains	3
DIT	151	Power Trains Lab	2
		Electives (Diesel Courses/Industrial Education Core)	7
		Total	**12**

Medium and Heavy Truck Mechanic Helper - 4706053149

(Offered at ASC, BSC, ELC, HZC, MYC, OWC, SEC, SMC,WKC)

ADX	120	Basic Automotive Electricity AND	3
ADX	121	Basic Automotive Electricity Lab OR	2
BEX	100	Basic Electricity for Non-Majors AND	(3)
BEX	101	Basic Electricity Lab for Non-Majors OR	(2)
ELT	110	Circuits I	(5)
ADX	150	Engine Repair AND	3
ADX	151	Engine Repair Lab OR	2
DIT	110	Introduction to Diesel Engines AND	(3)
DIT	111	Introduction to Diesel Engines Lab	(2)
ADX	260	Electrical Systems AND	3
ADX	261	Electrical Systems Lab OR	2
DIT	190	Electrical Systems for Diesel Equipment AND	(3)
DIT	191	Electrical Systems for Diesel Equipment Lab	(2)
DIT	112	Diesel Engine Repair	3
DIT	113	Diesel Engine Repair Lab	2
DIT	160	Steering and Suspension	3
DIT	161	Steering and Suspension Lab	2
DIT	180	Brakes	3
DIT	181	Brakes Lab	2
		Total	**30**

Mobile Air Conditioning Mechanic - 4706053169

(Offered at ASC, BSC, ELC, GTW, HZC, HPC, MYC, OWC, SEC, SMC,WKC)

ADX	170	Climate Control	3
ADX	171	Climate Control Lab	1
		Electives (Diesel Courses/Industrial Education Core)	8
		Total	**12**

Preventive Maintenance Mechanic - 4706053199

(Offered at ASC, BSC, ELC, GTW, HZC, HPC, MYC, OWC, SEC, SMC,WKC)

DIT	103	Preventive Maintenance Lab	2
		Electives (Diesel Courses/Industrial Education Core)	11
		Total	**13**

Undercarriage Mechanic - 4706053099

(Offered at ASC, BSC, ELC, HZC, MYC, OWC, SEC, SMC,WKC)

DIT	123	Undercarriage Lab	3
		Electives (Diesel Courses/Industrial Education Core)	9
		Total	**12**

Digital Game and Simulation Design

Provides students with a thorough understanding of techniques for designing advanced 3D games and simulations. Courses will cover 2D and 3D graphics, animation, character development, texturing, rigging, scripting and game setup using state-of-the-art software development tools.

Completing students will have developed the skills necessary to create sophisticated 3D graphics and a simple application that can be used for games and simulations.

Certificate

Digital Game and Simulation Design - 1108033029

(Offered at JFC, MYC)

		Computer/Digital Literacy	0-3
DGD	131	3D Texturing and Lighting I	3
DGD	132	Introduction to Digital 3D Graphics	3
DGD	231	3D Texturing and Lighting II	3
DGD	232	3D Character Development	3
DGD	233	3D Character Rigging	3
DGD	234	3D Animation	3
DGD	235	3D Special Effects	3
DGD	236	Game Engines I	3
DGD	237	Game Engines II	3
		Total	**27-30**

Digital Printing Technology

The 3D Printing Technician – Level I certificate prepares individuals to design for and apply 3D printing technology, also known as additive manufacturing, towards a host of basic applications. Areas of study will incorporate a foundational understanding of the technology, the equipment, thermoplastics and other materials, design applications, related software, business applications, scanning technology, and other related concepts. Upon completion of the certificate, students will be versed in the broad impact of the technology and prepared for an entry level career within an industry that applies 3D printing technology in some fashion.

Certificate

3D Printing Technician- Level I - 1506073059

(Offered at SMC)

DPT	100	Introduction to 3D Printing Technology OR	3
DPT	102	3D Printing Technology Fundamentals AND	(2)
CIT	105	Introduction to Computers	(3)
BAS	160	Introduction to Business OR	3
BAS	170	Entrepreneurship	(3)
DPT	150	Introduction to Engineering Mechanics for 3D Printing	3
DPT	280	Special Projects for 3D Printing, Level I	1
		Elective: Any technical, entry level course within a field where 3D printing applications exist.	3
		Elective: Any technical, entry level course within a field where 3D printing applications exist.	3
		Total	**16-18**

Education

The Associate in Applied Science Degree (AAS) – Education: Educator Preparation is a pathway designed for students who wish to begin coursework at a community and technical college and then apply for transfer admission to a teacher education program at a four-year college or university.

Associate in Applied Science

Education - 1315017019

Educator Preparation Track - 131501703

(Offered at BLC, ELC, GTW, JFC, OWC, SEC)

General Education

ENG	101	Writing I	3
ENG	102	Writing II	3
COM	181	Basic Public Speaking	3
		OR	
COM	252	Introduction to Interpersonal Communications	(3)
–		Arts and Humanities[1]	3-4
HIS	108	History of the United States Through 1865	3
		OR	
HIS	109	History of the United States Since 1865	(3)
MAT	146	Contemporary College Mathematics	3
		OR	
MAT	150	College Algebra	(3)
		OR	
MA	109	College Algebra	(3)

		OR	
MA	111	Contemporary Mathematics	(3)
		Natural Sciences[2]	6
PSY	110	General Psychology	3
		Social/Behavioral Sciences[1]	6
		Subtotal	**34-35**

Technical Core or Support Core (Common)

		Digital Literacy[3]	3
EDU	201	An Introduction to American Education	3
EDP	202	Human Development and Learning	3
EDP	203	Teaching Exceptional Learners in Regular Classrooms	3
		Total Common	**12**

Technical or Support Courses

		Technical or Support Electives	**15**
		Total Credit Hours	**61-62**

[1]At least one course must be selected from the identified Cultural Studies course list.

[2]Must include at least one Natural Science course with a laboratory experience.

[3]Students must fulfill the Digital Literacy requirement by means specified in the KCTCS Catalog. A student who fulfills the Digital Literacy requirement by a means other than earning credit for an approved KCTCS digital literacy course must take three (3) credit hours of coursework approved by the program coordinator.

Emergency Medical Services - Paramedic

Provides a comprehensive course of study that prepares the graduate for licensure as a Paramedic (EMTP). The curriculum is structured based on the National EMS Education Standards and regulations set forth by the Kentucky Board of Emergency Medical Services (KBEMS). The three-phase curriculum is designed to provide the student with the cognitive knowledge, psychomotor skills, and affective behaviors necessary to competently perform as a Paramedic. The EMS program prepares students to function in the emergency medical profession as a Paramedic in a variety of environments. Graduates primarily provide pre-hospital emergency care to acutely ill and/or injured individuals while working on an ambulance, mobile advanced life support unit, industrial on-site unit, fire department, emergency department, and other agencies. Graduates are eligible to apply to take the National Registry Paramedic Exam. Students may earn either a Certificate or Associate in Applied Science Degree at the Paramedic level. Credit may be awarded to currently practicing paramedics towards the Associate in Applied Science Degree. Enrollment in this program is limited; therefore, a selective admissions process is followed. Students are required to hold current unrestricted certification as an EMT in Kentucky or hold current unrestricted registration with the National Registry EMT as an EMT to be eligible for paramedic program admission.

Acceptance into the EMS-Paramedic Program is based upon a selective admissions process. In order to be considered for admission, applicants must comply with college and program admission requirements. Applicants must present current, unrestricted state certification or proof of National Registry of EMT eligibility to become state certified. Licensed paramedics may receive credit towards the Associate of Applied Science in Emergency Medical Services – Paramedic. When eligible, the licensed paramedic will be awarded thirty-eight (38) semester credit hours upon the completion of: a) applying to the college of choice; b) submitting a letter of intent and a copy of the required licensure/certification document to the program coordinator with subsequent validation by the Registrar; and c) completing at least nine (9) credit hours from the degree-granting institution. Credit will be awarded as follows: 4 credit hours/EMS 200 Introduction to Paramedicine; 3 credit hours/EMS 210 Emergency Pharmacology; 3 credit hours/EMS 220 Cardiovascular Emergencies; 4 credit hours/EMS 230 Traumatic Emergencies; 3 credit hours/EMS 240 Medical Emergencies I; 3 credit hours/EMS 250 Medical Emergencies II; 3 credit hours/EMS 260 Special Populations; 1 credit hour/EMS 270 EMS Operations; 1 credit hour/EMS 275 Seminar in ALS; 5 credit hours/EMS 285 Field Internship & Summation; 2 credit hours/EMS 211 Fundamentals Lab; 1 credit hour/EMS 221 Cardiac & Trauma Lab; 1 credit hour/EMS 231 Medical Lab; 1 credit hour/EMS 215 Clinical Experience I; 1 credit hour/EMS 225 Clinical Experience II; 2 credit hours/EMS 235 Clinical Experience III. Students must meet the twenty-five percent (25%) residency requirements of the degree-granting institution.

Students select their career option preference, certificate or degree, either during advising or upon admission to the program, but may choose to change their career path while in the program without reapplying for admission to the college.

Student can receive a certificate as an Electrocardiogram Technician by completing EMS 150. EMS 150 will prepare students to perform and interpret electrocardiograms in a hospital or clinical setting.

Associate in Applied Science

Emergency Medical Services - Paramedic - 5109047029

(Offered at ASC, GTW, HPC, HZC, JFC, MDC, OWC, SMC,WKC)

General Education:

ENG	101	Writing I	3
PSY	110	General Psychology	3
BIO	135	Basic Anatomy and Physiology with Laboratory*	4
		Quantitative Reasoning	3
		Oral Communications	3
		Heritage or Humanities	3
AHS	115	Medical Terminology OR	3
CLA	131	Medical Terminology from Greek and Latin	(3)
		Digital Literacy	0-3
EMS	200	Introduction to Paramedicine	4
EMS	210	Emergency Pharmacology	3
EMS	211	Fundamentals Lab	2
EMS	215	Clinical Experience I	1
EMS	220	Cardiovascular Emergencies	3
EMS	221	Cardiac and Trauma Lab	1
EMS	225	Clinical Experience II	1
EMS	230	Traumatic Emergencies	4
EMS	231	Medical Lab	1
EMS	235	Clinical Experience III	2
EMS	240	Medical Emergencies I	3
EMS	250	Medical Emergencies II	3
EMS	260	Special Populations	3
EMS	270	EMS Operations	1
EMS	275	Seminar in Advanced Life Support (ALS)	1
EMS	285	Field Internship & Summation	5-6
AHS	201	Management Principles for Allied Health Providers	3
		Total Credits	**63-67**

*BIO 137 & BIO 139 may be substituted for BIO 135

Certificate

Emergency Medical Services - Paramedic - 5109043040

(Offered at ASC, BLC, HZC, GTW, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

BIO	135	Basic Anatomy and Physiology with Laboratory*	4
AHS	115	Medical Terminology OR	3
CLA	131	Medical Terminology Greek/Latin	(3)
FHM	100	Dosage Calculations OR	2
MAT	110	Applied Mathematics	(3)
EMS	200	Introduction to Paramedicine	4
EMS	210	Emergency Pharmacology	3
EMS	211	Fundamentals Lab	2
EMS	215	Clinical Experience I	1
EMS	220	Cardiovascular Emergencies	3

EMS	221	Cardiac and Trauma Lab	1
EMS	225	Clinical Experience II	1
EMS	230	Traumatic Emergencies	4
EMS	231	Medical Lab	1
EMS	235	Clinical Experience III	2
EMS	240	Medical Emergencies I	3
EMS	250	Medical Emergencies II	3
EMS	260	Special Populations	3
EMS	270	EMS Operations	1
EMS	275	Seminar in Advanced Life Support (ALS)	1
EMS	285	Field Internship & Summation	5-6
		Total Credits	**47-49**

*BIO 137 & BIO 139 may be substituted for BIO 135

Electrocardiogram Technician – 5109043060

(Offered at HZC, MDC, OWC)

EMS	150	Electrocardiogram Technology	5
		Total Credits	**5**

Energy Management

The Energy Management (EM) degree is designed to give students the skills and national certifications required to receive employment in the rapidly growing field of energy management and positions in the energy industry. The embedded certificates include: the Center for Energy Workforce Development (CEWD) Energy Industry Fundamental Certificate, the Building Performance Institute's Building Specialist certificate, The North American Board of Certified Energy Practitioners' Entry Level Solar certification, the Leadership in Energy and Environmental Design's Green Associate certification, and the Environmental Protection Agency's Article 608 certification. The program is designed to meet the needs of non-traditional and working students by having courses absent of pre-requisites. The program has several embedded certificates that will give many exit points to employment. Graduates of the EM program will be qualified to recommend improvements to commercial and residential buildings by analyzing subsystems that contribute to higher energy usage.

Documentation of digital literacy as defined by KCTCS is required prior to enrolling in the first Energy Management course.

Associate in Applied Science

Energy Management -1505037039

(Offered at MDC)

General Education

		Quantitative Reasoning	3
		Natural Sciences	3
		Social/Behavioral Sciences	3
		Heritage/Humanities	3
		Written Communication	3
		Subtotal	**15**

Technical Core

ENM	101	Energy Industry Fundamentals	9
ENM	111	Sustainability Management OR	3
		One Study Abroad/Overseas Experience course (HRS 200,(3) IES 235 Or other Study Abroad course from a non-KCTCS accredited higher education institution approved by the Energy Management program coordinator).	
ENM	121	Solar Design and Applications	3
ENM	200	Commercial Energy Analysis	3
ENM	210	Smart Grid Applications	3
AIT	220	The Integrated Power Grid	3
ENM	230	Building Automation	3
EGY	240	Energy Analysis and Efficiency	4
ENM	250	Regulatory and Environmental Issues	3
ENM	260	Air Conditioning and Refrigeration Regulations	3
BRX	120	Basic Blueprint Reading	3
BAS	160	Introduction to Business	3
BAS	283	Principles of Management OR	3
BAS	284	Applied Management Skills	(3)
		Subtotal	**46**
		Total Credits	**61**

Diploma

Energy Management - 1505034019

(Offered at MDC)

General Education

		Natural Sciences	3
		Written/Oral Communications	3
		Subtotal	**6**

Technical Core

ENM	101	Energy Industry Fundamentals	9
ENM	111	Sustainability Management OR	3
		One Study Abroad/Overseas Experience course (HRS 200,(3) IES 235 Or other Study Abroad course from a non-KCTCS accredited higher education institution approved by the Energy Management program coordinator).	
ENM	121	Solar Design and Applications	3
ENM	200	Commercial Energy Analysis	3
ENM	210	Smart Grid Applications	3
AIT	220	The Integrated Power Grid	3
ENM	230	Building Automation	3
EGY	240	Energy Analysis and Efficiency	4
ENM	250	Regulatory and Environmental Issues	3
ENM	260	Air Conditioning and Refrigeration Regulations	3
BRX	120	Basic Blueprint Reading	3
BAS	160	Introduction to Business	3
BAS	283	Principles of Management OR	3
BAS	284	Applied Management Skills	(3)
		Subtotal	**46**
		Total Credits	**52**

Certificates

Fundamentals of Energy Production – 1505033089

(Offered at MDC)

ENM	101	Energy Industry Fundamentals	9
		Total Credits	**9**

Commercial Energy Analysis – 1505033099

(Offered at MDC)

ENM	111	Sustainability Management OR	3
		One Study Abroad/Overseas Experience course (HRS 200,(3) IES 235 Or other Study Abroad course from a non-KCTCS accredited higher education institution approved by the Energy Management program coordinator).	
ENM	200	Commercial Energy Analysis	3
ENM	230	Building Automation	3
ENM	250	Regulatory and Environmental Issues	3
ENM	260	Air Conditioning and Refrigeration Regulations	3
		Total Credits	**15**

Sustainable Energy - 1505033109

(Offered at MDC)

ENM	111	Sustainability Management OR	3
		One Study Abroad/Overseas Experience course (HRS 200,(3 IES 235 Or other Study Abroad course from a non-KCTCS accredited higher education institution approved by the Energy Management Program coordinator).	
ENM	121	Solar Design and Applications	3
AIT	220	The Integrated Power Grid	3
ENM	210	Smart Grid Applications	3
		Total Credits	**12**

Energy Systems

The Energy Systems degree is designed to prepare its graduates for entry level positions across the entire range of energy technologies. The initial track will prepare students to work safely and effectively as operators in fossil-fueled electricity generating power plants. The curriculum will also provide a background in other types of energy production and distribution, including solar, wind, geothermal, and petroleum-based as well as emerging technologies such as ethanol, biodiesel, and clean coal technologies. Graduates will have an understanding of the financial, societal, and environmental impacts of the various energy production technologies, and will be able to operate and troubleshoot the machinery and systems used in energy production.

Associate in Applied Science

Energy Systems - 1505037019

(Offered at MYC)

General Education

MAT	116	Technical Mathematics	3
ENG	101	Writing I	3
PHY	151	Introductory Physics I or higher	3
		Heritage/Humanities	3
		Social/Behavioral Sciences (ECO 101 preferred)	3
		Oral Communications	3
		Subtotal	**18**

Technical Core

		Computer/Digital Literacy	0-3
ESP	101	Introduction to Energy Systems	3
ESP	211	Power Plant Operations I	3
ISX	101	Introduction to Industrial Safety	3
ELT	102	Blueprint Reading	2
ESP	220	Power Plant Thermodynamics OR	3
ELT	208	Thermodynamic Applications	(3)
ENV	110	Introduction to Environmental Technology	4
ESP	110	Petroleum Based Fuels	3
ESP	280	Capstone in Energy Systems or	3
ISM	210	Fundamentals of Process Control	(3)
		Subtotal	**24-27**

Power Plant Operations Track - 150503701

(Offered at MYC)

ESP	212	Power Plant Operations II	3
ESP	213	Power Plant Operations III	3
ESP	214	Power Plant Operations IV	3
ESP	120	Power Plant Chemistry	3
ESP	130	Electrical Concepts	3
ESP	132	Electrical Machinery and Controls	3
COE**	199	Cooperative Education	3
		Subtotal	**21**
		Total Credits	**63-66**

**COE 199 requirement can be met by relevant work experience approved by the program coordinator.

Certificate

Power Plant Operations - 1505033019

(Offered at MYC)

General Education

MAT	116	Technical Mathematics	3
PHY	151	Introductory Physics I or higher	3
		Subtotal	**6**

Core

ELT	102	Blueprint Reading	2
ESP	220	Power Plant Thermodynamics OR	3
ELT	208	Thermodynamic Applications	(3)
ESP	211	Power Plant Operations I	3
ESP	120	Power Plant Chemistry	3
ISX	101	Introduction to Industrial Safety	3
ESP	212	Power Plant Operations II	3
ESP	213	Power Plant Operations III	3
ESP	130	Electrical Concepts	3
COE**	199	Cooperative Education	3
		Subtotal	**26**
		Total Credits	**32**

**COE 199 requirement can be met by relevant work experience approved by the program coordinator.

Energy Technologies

Offers an option for students to build a career in the energy field. The degree incorporates multiple tracks for certificates associated with different energy careers, allowing students to match their strengths and interests with an appropriate plan of study. It is focused on preparing graduates to enter the workforce in positions such as an entry-level utility apprentice, line maintenance technician, transformer/relay technician, fiber optic technician, outside plant fiber optic technician, network communications technician, voice and data wiring technician, or renewable energy and energy efficiency specialist. The degree provides a broad foundation across many facets of utility and communications technologies, resulting in a multi-skilled technician valued by the workforce. Hands-on instruction is used to teach students aspects of smart grid technology, fiber optics installation, utility operation, line maintenance, underground operations, substation operations, transmission distribution, solar/photovoltaic systems installation, design and placement of wind energy systems, energy efficiency analysis, electrical energy efficiency control technologies, and job safety. The technical certificate tracks are complemented by an operations management certificate, which provides background knowledge of business operations.

Associate in Applied Science

Energy Technologies - 1505037029

(Offered at GTW)

General Education

ENG	101	Writing I	3
MAT	110	Applied Mathematics OR	3
		Any Higher Level Quantitative Reasoning Courses	(3)
PHY	171	Applied Physics OR	4
		Natural Sciences	(3)
		Heritage / Humanities	3
		Oral Communications	3
		Social/Behavioral Sciences	3
		Subtotal	**18-19**

Core

BAS	160	Introduction to Business	3
EET	150	Transformers	2
EET	151	Transformers Lab	1
ELT	110	Circuits I	5
ETT	110	Voice and Data Installer Level I	4
ISX	101	Introduction to Industrial Safety	3
EGY	170	Energy Utility Technologies	4
EGY	120	Outside Plant Communications	4
		Computer/Digital Literacy (NOTE: Computer/Digital literacy must be demonstrated either by competency exam or by successfully completing a computer/digital literacy course.)	0-3
		Subtotal	**26-29**

Technical Electives

		Any course listed below OR in the certificates listed below (not including courses in the technical core) OR as approved by the program coordinator	16
COE	199	Cooperative Education (up to 8 credit hours)	
DFT	122	Introduction to Computer Aided Drafting	
		Subtotal	**16**
		Total Credits	**60-64**

Certificate

Energy Efficiency Electrical Controls Technician – 1505033049

(Offered at GTW)

EET	154	Electrical Construction I	2
EET	155	Electrical Construction I Lab	2
EET	250	National Electric Code	4
EET	252	Electrical Construction II	2
EET	253	Electrical Construction II Lab	2
ELT	110	Circuits I	5
EGY	220	Energy Efficiency Electrical Controls	4
		Total	**21**

Outside Plant Technician – 1505033039

(Offered at GTW)

ELT	110	Circuits I	5
ETT	110	Voice and Data Installer Level I	4
ISX	101	Introduction to Industrial Safety	3
EGY	120	Outside Plant Communications	4
		Computer/Digital Literacy (NOTE: Computer/Digital literacy must be demonstrated either by competency exam or by successfully completing a computer/digital literacy course.)	0-3
		Total	**16-19**

Energy Utility Technician – 1505033029

(Offered at GTW)

EET	150	Transformers	2
EET	151	Transformers Lab	1
ELT	110	Circuits I	5
ISX	101	Introduction to Industrial Safety	3
EGY	170	Energy Utility Technologies	4
		Computer/Digital Literacy (NOTE: Computer/Digital literacy must be demonstrated either by competency exam or by successfully completing a computer/digital literacy course.)	0-3
		Total	**15-18**

Wind System Technologies – 1505033059

(Offered at BSC, BLC, GTW)

ELT	110	Circuits I	5
IMT	150	Maintaining Industrial Equipment	3
IMT	151	Maintaining Industrial Equipment Lab	2
EGY	250	Wind / Turbine Technologies	4
		Total	**14**

Solar/Photovoltaic Technologies – 1505033069

(Offered at BSC, BLC, GTW)

EET	154	Electrical Construction I	2
EET	155	Electrical Construction I Lab	2
ELT	110	Circuits I	5
EGY	230	Solar / Photovoltaic Technologies	4
		Total	**13**

Energy Efficiency and Analysis – 1505033079

(Offered at BSC, BLC, GTW)

ACR	170	Heat Load / Duct Design	3
EGY	240	Energy Efficiency and Analysis	4
		Computer/Digital Literacy (NOTE: Computer/Digital literacy must be demonstrated either by competency exam or by successfully completing a computer/digital literacy course.)	0-3
		Total	**7-10**

Engineering and Electronics Technology

The Engineering and Electronics Technology program provides course work, competencies and experiences to prepare the students for success in the areas of Engineering technology, electronics, computer maintenance, mechanical, industrial, computer aided design, robotics and automation, communications, instrumentation, medical equipment, and telephony.

Progress in the Engineering and Electronics Technology program is contingent upon achievement of a grade of "C" or better in each technical course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

Associate in Applied Science

Engineering and Electronics Technology - 1503997019

(Offered at BLC, BSC, ELC, HPC, JFC, OWC, SKY, SMC)

General Education

MAT	150	College Algebra OR	3
MAT	126	Technical Algebra and Trigonometry OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
PHY	171	Applied Physics OR	4
		Other Natural Sciences with Consent of Program Coordinator	(3)
ENG	101	Writing I	3
		Social/Behavioral Sciences	3
		Oral Communications	3
		Heritage/Humanities	3
		Subtotal	**18-19**

Core:

ELT	110	Circuits I	5
ELT	114	Circuits II	5
ELT	210	Devices I	4
ELT	120	Digital I	3
CAD	100	Introduction to Computer Aided Design OR	3
CAD	103	CAD Fundamentals OR	(4)
BRX	120	Basic Blueprint Reading OR	(3)

		Equivalent Course with Consent of Program Coordinator	(3-4)
ELT	289	Engineering and Electronics Technology Capstone Course	1
		Digital Literacy	3
		NOTE: If a student takes CAD 103 to meet Digital Literacy requirements, he/she MUST take an additional three (3) credit hours of elective credit not used in the selected track.	
		Subtotal	**24-25**

Electronics Track – 150399707

(Offered at BLC, ELC, HPC, JFC, OWC, SMC)

ELT	214	Devices II	4
ELT	220	Digital II	3
		Technical Electives *	13
		Subtotal	**20**
		Total	**62-64**

*Technical Electives: Any EET, ELT, IMT, CIT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

Computer Maintenance Track – 150399703

(Offered at BLC, ELC, JFC, SMC)

ELT	234	Computer Hardware Maintenance AND	3
ELT	232	Computer Software Maintenance OR	3
CIT	111	Computer Hardware and Software	(4)
ELT	220	Digital II	3
CIT	160	Introduction to Networking Concepts OR	4
CIT	161	Networking Fundamentals	(4)
		Technical Electives *	9
		Subtotal	**20-22**
		Total	**62-66**

*Technical Electives: Any EET, ELT, IMT, CIT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

Apprenticeship Track – 150399701

(Offered at JFC)

APS	201	Apprenticeship Studies	24
		Total	**66-68**

*Technical Electives: Any EET, ELT, IMT, CIS, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

Mechanical Track – 150399706

(Offered at JFC, OWC)

ELT	122	Mechanical Power Transmission Systems AND	3
ELT	124	Mechanical Power Transmission Systems Lab OR	1
IMT	150	Maintaining Industrial Equipment I AND	(3)
IMT	151	Maintaining Industrial Equipment I Lab	(2)
ELT	265	Applied Fluid Power	3
CAD	200	Intermediate Computer Aided Drafting	4
		Technical Electives *	8
		Subtotal	**19-20**
		Total	**61-64**

*Technical Electives: Any EET, ELT, IMT, CIT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

Industrial Track – 150399704

(Offered at BLC, HPC, JFC, OWC)

ELT	214	Devices II	4
ELT	220	Digital II	3
ELT	244	Electrical Machinery and Controls OR	4
EET	270	Electrical Motor Controls I AND	(2)
EET	271	Electrical Motor Controls I Lab	(2)
ELT	250	Programmable Logic Controllers OR	4
EET	276	Programmable Logic Controllers AND	(2)
EET	277	Programmable Logic Controllers Lab	(2)
		Technical Electives *	9
		Subtotal	**24**
		Total	**66-68**

*Technical Electives: Any EET, ET, ELT, IMT, CIS, CIT, NIS, IT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

Computer Aided Design Track – 150399702

(Offered at HPC, JFC)

CAD	150	Programming in CAD OR	4
ELT	290	Selected Topics in Engineering Technology	(3-4)
CAD	200	Intermediate Computer Aided Drafting	4
CAD	201	Advanced 3D Modeling	4
		Technical Electives *	12
		Subtotal	**23-24**
		Total	**65-68**

*Technical Electives: Any EET, ELT, IMT, CIT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

Robotics and Automation Track – 150399705

(Offered at BLC, HPC, JFC, SKY)

ELT	118	Manufacturing III: Computer Numerical Control OR	3
CMM	132	CAD/CAM/CNC	(3)
ELT	265	Applied Fluid Power	3
ELT	260	Robotics and Industrial Automation	5
ELT	244	Electrical Machinery and Controls OR	4
EET	270	Electrical Motor Controls I AND	(2)
EET	271	Electrical Motor Controls I Lab	(2)
ELT	250	Programmable Logic Controllers OR	4
EET	276	Programmable Logic Controllers AND	(2)
EET	277	Programmable Logic Controllers Lab	(2)
		Technical Electives *	5
		Subtotal	**24**
		Total	**66-68**

*Technical Electives: Any EET, ELT, IMT, CIT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

Communications Track – 150399708

(Offered at BLC, ELC)

ELT	214	Devices II	4
ELT	220	Digital II	3
ELT	240	Communications Electronics	6
		Technical Electives *	9
		Subtotal	**22**
		Total	**64-66**

*Technical Electives: Any EET, ELT, IMT, CIT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

Instrumentation Track – 150399709

(Offered at ELC)

ELT	220	Digital II	3
ISM	102	Fundamentals of Instrumentation	4
ISM	210	Fundamentals of Process Control	4
		Technical Electives *	7
		Subtotal	**18**
		Total	**60-62**

*Technical Electives: Any EET, ELT, IMT, CIT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

Medical Equipment and Instrumentation Track – 150399710

ELT	214	Devices II	4
BIO	135	Basic Anatomy and Physiology with Laboratory	4
BMT	200	Insight into Biomedical Equipment Technology	2
BMT	202	General Equipment Studies	3
BMT	204	Electrical, Mechanical, and Optical Principles	3
BMT	205	Biomedical Equipment Practices I	1
BMT	206	Specialized Biomedical Equipment	3
BMT	207	Biomedical Equipment Practices II	1
BMT	209	Clinical	2
		Subtotal	**23**
		Total	**65-67**

Diplomas

Electronics – 1503994019

(Offered at BLC, BSC, ELC, HPC, JFC, OWC, SEC, SMC)

General Education:

Area 1:		Written Communication or Oral Communications	3
		AND	
Area 2:			
MAT	150	College Algebra OR	3
MAT	126	Technical Algebra and Trigonometry OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
		Subtotal	**6**

Core:

ELT	110	Circuits I	5
ELT	114	Circuits II	5
ELT	210	Devices I	4
ELT	120	Digital I	3
CAD	100	Introduction to Computer Aided Design OR	3
CAD	103	CAD Fundamentals OR	(4)
BRX	120	Basic Blueprint Reading OR	(3)
		Equivalent Course with Consent of Program Coordinator	(3-4)
ELT	289	Engineering and Electronics Technology Capstone Course	1
		Digital Literacy	3
		NOTE: If a student takes CAD 103 to meet Digital Literacy requirements, he/she MUST take an additional three (3) credit hours of elective credit not used in the selected track	(3)
COED	198	Practicum OR	1-2
COE	199	Cooperative Education OR	(1-2)
		Equivalent Course with Consent of Program Coordinator	(1-2)
		Subtotal	**25-27**
ELT	214	Devices II	4
ELT	220	Digital II	3
		Technical Electives *	13
		Subtotal	**20**
		Total	**51-53**

*Technical Electives: Any EET, ELT, IMT, CIT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

Apprenticeship- 1503994059

(Offered at JFC)

General Education:

Area 1:		Written Communication or Oral Communications	3
		AND	
Area 2:			
MAT	150	College Algebra OR	3
MAT	126	Technical Algebra and Trigonometry OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
		Subtotal	**6**

Core:

ELT	110	Circuits I	5
ELT	114	Circuits II	5
ELT	210	Devices I	4
ELT	120	Digital I	3
CAD	100	Introduction to Computer Aided Design OR	3
CAD	103	CAD Fundamentals OR	(4)
BRX	120	Basic Blueprint Reading OR	(3)
		Equivalent Course with Consent of Program Coordinator	(3-4)
ELT	289	Engineering and Electronics Technology Capstone Course	1
		Digital Literacy	3
		NOTE: If a student takes CAD 103 to meet Digital Literacy requirements, he/she MUST take an additional three (3) credit hours of elective credit not used in the selected track	(3)
COED	198	Practicum OR	1-2
COE	199	Cooperative Education OR	(1-2)
		Equivalent Course with Consent of Program Coordinator	(1-2)
		Subtotal	**25-27**
APS	201	Apprenticeship Studies	24
		Subtotal	**24**
		Total	**55-57**

*Technical Electives: Any EET, ELT, IMT, CIT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

Industrial Electronics – 1503994079

(Offered at BLC, HPC, JFC, OWC, SEC)

General Education:

Area 1:		Written Communication or Oral Communications	3
		AND	
Area 2:			
MAT	150	College Algebra OR	3
MAT	126	Technical Algebra and Trigonometry OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
		Subtotal	**6**

Core:

ELT	110	Circuits I	5
ELT	114	Circuits II	5
ELT	210	Devices I	4
ELT	120	Digital I	3
CAD	100	Introduction to Computer Aided Design OR	3
CAD	103	CAD Fundamentals OR	(4)
BRX	120	Basic Blueprint Reading OR	(3)
		Equivalent Course with Consent of Program Coordinator	(3-4)
ELT	289	Engineering and Electronics Technology Capstone Course	1
		Digital Literacy	3
		NOTE: If a student takes CAD 103 to meet Digital Literacy requirements, he/she MUST take an additional three (3) credit hours of elective credit not used in the selected track	(3)
COED	198	Practicum OR	1-2
COE	199	Cooperative Education OR	(1-2)
		Equivalent Course with Consent of Program Coordinator	(1-2)
		Subtotal	**25-27**
ELT	214	Devices II	4
ELT	220	Digital II	3
ELT	244	Electrical Machinery and Controls OR	4
EET	270	Electrical Motor Controls I AND	(2)
EET	271	Electrical Motor Controls I Lab	(2)
ELT	250	Programmable Logic Controllers OR	4
EET	276	Programmable Logic Controllers AND	(2)
EET	277	Programmable Logic Controllers Lab	(2)
		Technical Electives *	9
		Subtotal	**24**
		Total	**55-57**

*Technical Electives: Any EET, ELT, IMT, CIT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

Engineering Design Technician – 1503994089

(Offered at JFC)

General Education:

Area 1:		Written Communication or Oral Communications	3
		AND	
Area 2:			
MAT	150	College Algebra OR	3
MAT	126	Technical Algebra and Trigonometry OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
		Subtotal	**6**

Core:

ELT	110	Circuits I	5
ELT	114	Circuits II	5
ELT	210	Devices I	4
ELT	120	Digital I	3
CAD	100	Introduction to Computer Aided Design OR	3
CAD	103	CAD Fundamentals OR	(4)
BRX	120	Basic Blueprint Reading OR	(3)
		Equivalent Course with Consent of Program Coordinator	(3-4)
ELT	289	Engineering and Electronics Technology Capstone Course	1
		Digital Literacy	3
		NOTE: If a student takes CAD 103 to meet Digital Literacy requirements, he/she MUST take an additional three (3) credit hours of elective credit not used in the selected track	(3)
COED	198	Practicum OR	1-2
COE	199	Cooperative Education OR	(1-2)
		Equivalent Course with Consent of Program Coordinator	(1-2)
		Subtotal	**25-27**
CAD	150	Programming in CAD OR	4
ELT	290	Selected Topics in Engineering Technology OR	(3-4)
CAD	200	Intermediate Computer Aided Drafting	4
CAD	201	Advanced 3D Modeling	4
		Technical Electives *	12
		Subtotal	**23-24**
		Total	**54-57**

*Technical Electives: Any EET, ELT, IMT, CIT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

Communications – 1503994029

(Offered at BLC, ELC, JFC, OWC, SEC, SMC)

General Education:

Area 1:		Written Communication or Oral Communications	3
		AND	
Area 2:			
MAT	150	College Algebra OR	3
MAT	126	Technical Algebra and Trigonometry OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
		Subtotal	**6**

Core:

ELT	110	Circuits I	5
ELT	114	Circuits II	5
ELT	210	Devices I	4
ELT	120	Digital I	3
CAD	100	Introduction to Computer Aided Design OR	3
CAD	103	CAD Fundamentals OR	(4)
BRX	120	Basic Blueprint Reading OR	(3)
		Equivalent Course with Consent of Program Coordinator	(3-4)
ELT	289	Engineering and Electronics Technology Capstone Course	1
		Digital Literacy	3
		NOTE: If a student takes CAD 103 to meet Digital Literacy requirements, he/she MUST take an additional three (3) credit hours of elective credit not used in the selected track	(3)
COED	198	Practicum OR	1-2
COE	199	Cooperative Education OR	(1-2)
		Equivalent Course with Consent of Program Coordinator	(1-2)
		Subtotal	**25-27**
ELT	214	Devices II	4
ELT	220	Digital II	3
ELT	240	Communications Electronics	6
		Technical Electives *	11
		Subtotal	**24**
		Total	**55-57**

*Technical Electives: Any EET, ELT, IMT, CIT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

Computer Maintenance – 1503994049

(Offered at BLC, ELC, JFC, OWC, SEC, SMC)

General Education:

Area 1:		Written Communication or Oral Communications	3
		AND	
Area 2:			
MAT	150	College Algebra OR	3
MAT	126	Technical Algebra and Trigonometry OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
		Subtotal	**6**

Core:

ELT	110	Circuits I	5
ELT	114	Circuits II	5
ELT	210	Devices I	4
ELT	120	Digital I	3
CAD	100	Introduction to Computer Aided Design OR	3
CAD	103	CAD Fundamentals OR	(4)
BRX	120	Basic Blueprint Reading OR	(3)
		Equivalent Course with Consent of Program Coordinator	(3-4)
ELT	289	Engineering and Electronics Technology Capstone Course	1
		Digital Literacy	3
		NOTE: If a student takes CAD 103 to meet Digital Literacy requirements, he/she MUST take an additional three (3) credit hours of elective credit not used in the selected track	(3)
COED	198	Practicum OR	1-2
COE	199	Cooperative Education OR	(1-2)
		Equivalent Course with Consent of Program Coordinator	(1-2)
		Subtotal	**25-27**
ELT	234	Computer Hardware Maintenance AND	3
ELT	232	Computer Software Maintenance OR	3
CIT	111	Computer Hardware and Software	(4)
ELT	220	Digital II	3
CIT	160	Introduction to Networking Concepts OR	4
CIT	161	Networking Fundamentals	(4)
		Technical Electives *	9
		Subtotal	**20-22**
		Total	**51-55**

*Technical Electives: Any EET, ELT, IMT, CIT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

Mechanical – 1503994069

(Offered at JFC, OWC)

General Education:

Area 1:		Written Communication or Oral Communications	3
		AND	
Area 2:			
MAT	150	College Algebra OR	3
MAT	126	Technical Algebra and Trigonometry OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
		Subtotal	**6**

Core:

ELT	110	Circuits I	5
ELT	114	Circuits II	5
ELT	210	Devices I	4
ELT	120	Digital I	3
CAD	100	Introduction to Computer Aided Design OR	3
CAD	103	CAD Fundamentals OR	(4)
BRX	120	Basic Blueprint Reading OR	(3)
		Equivalent Course with Consent of Program Coordinator	(3-4)
ELT	289	Engineering and Electronics Technology Capstone Course	1
		Digital Literacy	3
		NOTE: If a student takes CAD 103 to meet Digital Literacy requirements, he/she MUST take an additional three (3) credit hours of elective credit not used in the selected track	(3)
COED	198	Practicum OR	1-2
COE	199	Cooperative Education OR	(1-2)
		Equivalent Course with Consent of Program Coordinator	(1-2)
		Subtotal	**25-27**
ELT	122	Mechanical Power Transmission Systems AND	3
ELT	124	Mechanical Power Transmission Systems Lab OR	1
IMT	150	Maintaining Industrial Equipment I AND	(3)
IMT	151	Maintaining Industrial Equipment I Lab	(2)
ELT	265	Applied Fluid Power	3
BRX	120	Basic Blueprint Reading	3
CAD	200	Intermediate Computer Aided Drafting	4
		Technical Electives *	8
		Subtotal	**22-23**
		Total	**53-56**

*Technical Electives: Any EET, ELT, IMT, CIT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

Robotics and Automation – 1503994039

(Offered at BLC, BSC, HPC, JFC, OWC, SKY)

General Education:

Area 1:		Written Communication or Oral Communications	3
		AND	
Area 2:			
MAT	150	College Algebra OR	3
MAT	126	Technical Algebra and Trigonometry OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
		Subtotal	**6**

Core:

ELT	110	Circuits I	5
ELT	114	Circuits II	5
ELT	210	Devices I	4
ELT	120	Digital I	3
CAD	100	Introduction to Computer Aided Design OR	3
CAD	103	CAD Fundamentals OR	(4)
BRX	120	Basic Blueprint Reading OR	(3)
		Equivalent Course with Consent of Program Coordinator	(3-4)
ELT	289	Engineering and Electronics Technology Capstone Course	1
		Digital Literacy	3
		NOTE: If a student takes CAD 103 to meet Digital Literacy requirements, he/she MUST take an additional three (3) credit hours of elective credit not used in the selected track	(3)
COED	198	Practicum OR	1-2
COE	199	Cooperative Education OR	(1-2)
		Equivalent Course with Consent of Program Coordinator	(1-2)
		Subtotal	**25-27**
ELT	118	Manufacturing III: Computer Numerical Control OR	3
CMM	132	CAD/CAM/CNC	(3)
ELT	265	Applied Fluid Power	3
ELT	260	Robotics and Industrial Automation	5
ELT	244	Electrical Machinery and Controls OR	4
EET	270	Electrical Motor Controls I AND	(2)
EET	271	Electrical Motor Controls I Lab	(2)
ELT	250	Programmable Logic Controllers OR	4
EET	276	Programmable Logic Controllers AND	(2)
EET	277	Programmable Logic Controllers Lab	(2)
		Technical Electives *	5
		Subtotal	**24**
		Total	**55-57**

*Technical Electives: Any EET, ELT, IMT, CIT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

Instrumentation – 1503994099

(Offered at ELC)

General Education:

Area 1:		Written Communication or Oral Communications	3
		AND	
Area 2:			
MAT	150	College Algebra OR	3
MAT	126	Technical Algebra and Trigonometry OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
		Subtotal	**6**

Core:

ELT	110	Circuits I	5
ELT	114	Circuits II	5
ELT	210	Devices I	4
ELT	120	Digital I	3
CAD	100	Introduction to Computer Aided Design OR	3
CAD	103	CAD Fundamentals OR	(4)
BRX	120	Basic Blueprint Reading OR	(3)
		Equivalent Course with Consent of Program Coordinator	(3-4)
ELT	289	Engineering and Electronics Technology Capstone Course	1
		Digital Literacy	3
		NOTE: If a student takes CAD 103 to meet Digital Literacy requirements, he/she MUST take an additional three (3) credit hours of elective credit not used in the selected track	(3)
COED	198	Practicum OR	1-2
COE	199	Cooperative Education OR	(1-2)
		Equivalent Course with Consent of Program Coordinator	(1-2)
		Subtotal	**25-27**
ELT	220	Digital II	3
ISM	102	Fundamentals of Instrumentation	4
ISM	210	Fundamentals of Process Control	4
		Technical Electives *	9
		Subtotal	**20**
		Total	**51-53**

*Technical Electives: Any EET, ELT, IMT, CIT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

Digital Telephony - 1503994109

General Education:

Area 1:		Written Communication or Oral Communications	3
		AND	
Area 2:			
MAT	150	College Algebra OR	3
MAT	126	Technical Algebra and Trigonometry OR	(3)
		Higher Level Quantitative Reasoning Course	
		Subtotal	**6**

Core:

ELT	110	Circuits I	5
ELT	114	Circuits II	5
ELT	210	Devices I	4
ELT	120	Digital I	3
CAD	100	Introduction to Computer Aided Design OR	3
CAD	103	CAD Fundamentals OR	(4)
BRX	120	Basic Blueprint Reading OR	(3)
		Equivalent Course with Consent of Program Coordinator	(3-4)
ELT	289	Engineering and Electronics Technology Capstone Course	1
		Digital Literacy	3
		NOTE: If a student takes CAD 103 to meet Digital Literacy requirements, he/she MUST take an additional three (3) credit hours of elective credit not used in the selected track	(3)
COED	198	Practicum OR	1-2
COE	199	Cooperative Education OR	(1-2)
		Equivalent Course with Consent of Program Coordinator	(1-2)
		Subtotal	**25-27**
ELT	222	Mechanics of Telephony	3
ELT	224	Basic Telecoms Installation and Maintenance	3
ELT	226	Safety in the Workplace OR	2
ISX	100	Industrial Safety OR	(3)
		Equivalent Course with Consent of Program Coordinator	(3)
ELT	214	Devices II	4
ELT	220	Digital II	3
		Subtotal	**15-16**
		Total	**46-49**

*Technical Electives: Any EET, ELT, IMT, CIT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

Medical Equipment Service Technician - 1503994119

General Education:

Area 1:		Written Communication or Oral Communications	3
		AND	
Area 2:			
MAT	150	College Algebra OR	3
MAT	126	Technical Algebra and Trigonometry OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
		Subtotal	**6**

Core:

ELT	110	Circuits I	5
ELT	114	Circuits II	5
ELT	210	Devices I	4
ELT	120	Digital I	3
CAD	100	Introduction to Computer Aided Design OR	3
CAD	103	CAD Fundamentals OR	(4)
BRX	120	Basic Blueprint Reading OR	(3)
		Equivalent Course with Consent of Program Coordinator	(3-4)
ELT	289	Engineering and Electronics Technology Capstone Course	1
		Digital Literacy	3
		NOTE: If a student takes CAD 103 to meet Digital Literacy requirements, he/she MUST take an additional three (3) credit hours of elective credit not used in the selected track	(3)
COED	198	Practicum OR	1-2
COE	199	Cooperative Education OR	(1-2)
		Equivalent Course with Consent of Program Coordinator	(1-2)
		Subtotal	**25-27**
ELT	214	Devices II	5
BIO	135	Basic Anatomy and Physiology with Laboratory	4
BMT	200	Insight into Biomedical Equipment Technology	2
BMT	202	General Equipment Studies	3
BMT	204	Electrical, Mechanical, and Optical Principles	3
BMT	205	Biomedical Equipment Practices I	1
BMT	206	Specialized Equipment Studies	3
BMT	207	Biomedical Equipment Practices II	1
BMT	209	Clinical	2
		Subtotal	**24**
		Total	**55-57**

Certificates

Electronics Tester – 1503993089

(Offered at BLC, BSC, ELC, HEC, HPC, JFC, OWC, SKY, SMC)

ELT	110	Circuits I	5
ELT	114	Circuits II	5
ELT	120	Digital I	3
		Total	**13**

Electronics Technician –1503993069

(Offered at BLC, BSC, ELC, HEC, HPC, JFC, OWC, SEC, SKY, SMC)

ELT	110	Circuits I	5
ELT	114	Circuits II	5
ELT	210	Devices I	4
ELT	214	Devices II	4
ELT	120	Digital I	3
ELT	220	Digital II	3
		Total	**24**

Maintenance Technician – 1503993059

(Offered at BLC, BSC, ELC, HEC, HPC, JFC, OWC, SEC, SKY)

CAD	100	Introduction to Computer Aided Design OR	3
CAD	103	CAD Fundamentals OR	(4)
BRX	120	Basic Blueprint Reading OR	(3)
		Equivalent Course with Consent of Program Coordinator	(3-4)
ELT	110	Circuits I	5
ELT	114	Circuits II	5
ELT	265	Applied Fluid Power	3
ELT	244	Electrical Machinery and Controls OR	4
EET	270	Electrical Motor Controls I AND	(2)
EET	271	Electrical Motor Controls I Lab	(2)
ELT	250	Programmable Logic Controllers OR	4
EET	276	Programmable Logic Controllers AND	(2)
EET	277	Programmable Logic Controllers Lab	(2)
		Total	**24-25**

Robotics and Automation Technician – 1503993099

(Offered at BLC, BSC, HEC, HPC, JFC, OWC, SEC, SKY, SMC)

ELT	110	Circuits I	5
ELT	114	Circuits II	5
ELT	210	Devices I	4
ELT	120	Digital I	3
ELT	118	Manufacturing III, Computer Numerical Control OR	3
CMM	132	CAD/CAM/CNC	(3)
ELT	265	Applied Fluid Power	3
ELT	260	Robotics and Industrial Automation	5
ELT	244	Electrical Machinery and Controls OR	4
EET	270	Electrical Motor Controls I AND	(2)

EET	271	Electrical Motor Controls I Lab	(2)
ELT	250	Programmable Logic Controllers OR	4
EET	276	Programmable Logic Controllers AND	(2)
EET	277	Programmable Logic Controllers Lab	(2)
		Total	**36**

Digital Telephony Technician – 1503993119

(Offered at BSC, JFC, SEC)

ELT	222	Mechanics of Telephony	3
ELT	224	Basic Telecoms Installation and Maintenance	3
ELT	226	Safety in the Workplace OR	2
ISX	100	Industrial Safety	(3)
ELT	110	Circuits I	5
ELT	120	Digital I	3
		Digital Literacy	3
		Total	**19-20**

Computer Maintenance Technician – 1503993029

(Offered at BLC, BSC, ELC, HEC, HPC, JFC, OWC, SEC, SMC)

ELT	110	Circuits I	5
ELT	120	Digital I	3
		Digital Literacy	3
ELT	234	Computer Hardware Maintenance AND	3
ELT	232	Computer Software Maintenance OR	3
CIT	111	Computer Hardware and Software	(4)
		Total	**15-17**

Industrial Electronics Technician I – 1503993129

(Offered at BLC, BSC, ELC, HEC, HPC, JFC, OWC, SEC, SKY)

ELT	110	Circuits I	5
ELT	114	Circuits II	5
ELT	120	Digital I	3
ELT	250	Programmable Logic Controllers OR	4
EET	276	Programmable Logic Controllers AND	(2)
EET	277	Programmable Logic Controllers Lab	(2)
		Total	**17**

Industrial Electronics Technician II – 1503993139

(Offered at BLC, BSC, HPC, JFC, OWC, SEC, SKY)

ELT	110	Circuits I	5
ELT	114	Circuits II	5
ELT	210	Devices I	4
ELT	214	Devices II	4
ELT	120	Digital I	3
ELT	220	Digital II	3
ELT	244	Electrical Machinery and Controls OR	4
EET	270	Electrical Motor Controls I AND	(2)
EET	271	Electrical Motor Controls I Lab	(2)
ELT	250	Programmable Logic Controllers OR	4
EET	276	Programmable Logic Controllers AND	(2)
EET	277	Programmable Logic Controllers Lab	(2)
		Total	**32**

Mechanical Technician – 1503993149

(Offered at BSC, HPC, JFC, OWC, SEC)

CAD	100	Introduction to Computer Aided Design OR	3
		Equivalent Course with Consent of Program Coordinator	(3-4)
ELT	122	Mechanical Power Transmission Systems AND	3
ELT	124	Mechanical Power Transmission Systems Lab OR	1
IMT	150	Maintaining Industrial Equipment I AND	(3)
IMT	151	Maintaining Industrial Equipment I Lab	(2)
ELT	265	Applied Fluid Power	3
BRX	120	Basic Blueprint Reading	3
CAD	200	Intermediate Computer Aided Drafting	4
		Total	**17-19**

Automation Technician – 1503993229

(Offered at BLC, BSC, HEC, HPC, JFC, OWC, SEC, SKY)

ELT	110	Circuits I	5
ELT	244	Electrical Machinery and Controls OR	4
EET	270	Electrical Motor Controls I AND	(2)
EET	271	Electrical Motor Controls I Lab	(2)
ELT	250	Programmable Logic Controllers OR	4
EET	276	Programmable Logic Controllers AND	(2)
EET	277	Programmable Logic Controllers Lab	(2)
ELT	265	Applied Fluid Power	3
		Total	**16**

Communications Technician – 1503993039

(Offered at BLC, BSC, ELC, HPC, JFC, OWC, SEC, SMC)

ELT	110	Circuits I	5
ELT	114	Circuits II	5
ELT	210	Devices I	4
ELT	214	Devices II	4
ELT	120	Digital I	3
ELT	240	Communications Electronics	6
		Total	**27**

Instrumentation Technician – 1503993189

(Offered at BSC, ELC, JFC, OWC, SEC)

ELT	110	Circuits I	5
ELT	114	Circuits II	5
ISM	102	Fundamentals of Instrumentation	4
ISM	210	Fundamentals of Process Control	4
		Total	**18**

General Medical Equipment Service Provider - 1503993169

ELT	110	Circuits I	5
ELT	114	Circuits II	5
ELT	210	Devices I	4
ELT	120	Digital I	3
		Digital Literacy	3
ELT	234	Computer Hardware Maintenance OR	3
BIO	135	Basic Anatomy and Physiology with Laboratory	4
BMT	200	Insight into Biomedical Equipment Technology	2
BMT	202	General Equipment Studies	3
BMT	204	Electrical, Mechanical, and Optical Principles	3
BMT	205	Biomedical Equipment Practices I	1
		Total Credits	**36**

CAD Technician – 1503993199

(Offered at HPC, JFC, OWC, SEC)

CAD	100	Introduction to CAD OR	3
DFT	122	Introduction to Computer Aided Drafting	(4)
CAD	200	Intermediate Computer Aided Drafting	4
		Total Credits	**7-8**

*Technical Electives: Any EET, ENGT, ELT, IMT, CIT, ISM, CAD, ICT, MFG, or any other course as approved by the program coordinator.

Environmental Science Technology

This program includes specialized environmental science courses in addition to general education coursework to provide individuals the background necessary for understanding the ecological relationships of the environment. Coursework also emphasizes the application of scientific principles to pollution control problems in accordance with state and federal regulations. Practical lab and field experience in sampling and analysis will be stressed. Emphasis is placed on developing the students' ability to function effectively in a variety of job situations. Graduates of this program will be prepared to sample and analyze air, water and soil in accordance with state and federal regulations. Environmental technicians may be responsible for such job duties as air pollution surveillance, analysis of water and wastewater samples, ground water and surface water assessment, field sampling, data interpretation, and other support services to engineering and science professionals. Graduates in this field may be employed as technicians by federal, state and local governmental units as well as utilities, private industry, and environmental engineering consulting firms.

Admissions Requirements

The following information has been taken from the Rules of the Senate and is subject to change without notice. All applicants meeting the appropriate academic requirements shall be considered equally for admission to Bluegrass Community and Technical College or to any academic program thereof regardless of economic or social status, and without discrimination on the basis of race, color, religion, sex, marital status, beliefs, age, national origin, sexual orientation, or physical or mental disability.

In order to be admitted to the Environmental Science Technology (EST) Program, each student must be admitted to Bluegrass Community and Technical College.

In order to be admitted to the Environmental Science Technology Program, a student must:

1. Complete EST 150, EST 160, and MA 109 with a passing grade or transfer credit from an accredited institution for comparable courses (to be assessed by EST Coordinator), and
2. Attend a pre-admission conference with the EST Program coordinator or the coordinator's designee.

Associate in Applied Science

Environmental Science Technology - 1505077019

(Offered at BLC)

ENG	101	Writing I*	3
ENG	102	Writing II*	3
MA	109	College Algebra*	3
COM	181	Basic Public Speaking* OR	3
COM	252	Intro to Interpersonal Communications*	(3)
		Social/Behavioral Sciences Course*	3
		Technical Elective	3
		Heritage/Humanities Course	3
CIT	105	Intro to Computing	3
BIO	112	*Introduction to Biology	3
BIO	111	Intro to Biology Lab	1
EST	150	Introductory Ecology	4
CIS	130	Microcomputer Applications	3
CHE	170	General College Chemistry I	3
CHE	175	General College Chemistry Lab I	2
EST	160	Hydrolic Geology	3
EST	170	Environmental Sampling Laboratory	2
EST	220	Pollution of Aquatic Ecosystems	3
EST	230	Aquatic Chemistry Lab	2
EST	240	Sources and Effects of Air Pollution	4
		Technical Elective	3
EST	250	Solid and Hazardous Waste Management	3
EST	260	Environmental Analysis Lab	2
EST	270	Environmental Law and Regulation	3
EST	280	Environmental Trends Seminar	1
		Total Credits	**66**

Technical Electives

PHY	151	Introductory Physics I	3
COE	199	Cooperative Education (Internship)	1-3
EST	299	Selected Topics in EST	1-3
STA	210	Statistics: A Force in Human Judgment	3
CAD	100	Intro to Computer-Aided Design	3
ACH	185	Computer-Aided Drafting I	3
GIS	110	Spatial Data Analysis	3
GIS	120	Introduction to Geographic Information Systems	3
CIS	234	Advanced Spreadsheet Applications	3
ENG	203	Business Writing	3
CHE	180	General College Chemistry II	3
CHE	185	General College Chemistry Lab II	1
GEO	210	Pollutions, Hazards, and Environmental Mgmt	3
GLY	220	Principles of Physical Geology	4
ECO	201	Principles of Economics I	3
CE	211	Surveying	4

Courses not on this list may be approved at the coordinator's discretion.

* Satisfies General Education requirement for AAS degree

Environmental Technology

The environmental technology program has been developed in concert with various regulatory agencies, state universities and businesses and industries. Environmental Technicians conducts tests and field investigations to obtain data for use by environmental, engineering, and scientific personnel in determining sources and methods of controlling pollutants in air, water and soil, by utilizing knowledge of agriculture, chemistry, meteorology, engineering principles and applied technologies.

Certificates

Hazardous Materials Technician - 1505073019

(Offered at BLC)

CPU	100	Introduction to Computers	3
ENV	100	Environmental Mathematics	3
ENV	110	Introduction to Environmental Technology	4
ENV	111	Environmental Sampling Techniques Lab	2
ENV	120	Environmental Chemistry	3
ENV	121	Environmental Chemistry Lab	1
ENV	140	Geology, Hydrology and Soils	4
ENV	141	Geology, Hydrology and Soils Lab	2
ENV	260	Hazardous Materials	6
ENV	261	Hazardous Materials Lab	3
ENV	270	Treatment and Disposal Technologies	3
TEC	200	Technical Communications	3

Electives:

ENV	293	Special Problems I	(1)
ENV	295	Special Problems II	(2)
ENV	297	Special Problems III	(3)
		Total Credits	**37**

Waste Processing Attendant - 1505073029

ENV	110	Introduction to Environmental Technology	4
ENV	111	Environmental Sampling Techniques Lab	2
ENV	140	Geology, Hydrology and Soils	4
ENV	141	Geology, Hydrology and Soils Lab	2
ENV	260	Hazardous Materials	6
ENV	261	Hazardous Materials Lab	3

Electives:

ENV	293	Special Problems I	(1)
ENV	295	Special Problems II	(2)
ENV	297	Special Problems III	(3)
		Total Credits	**21**

Wastewater Treatment Plant Attendant - 1505073039

ENV	110	Introduction to Environmental Technology	4
ENV	111	Environmental Sampling Techniques Lab	2
ENV	140	Geology, Hydrology and Soils	4
ENV	141	Geology, Hydrology and Soils Lab	2
ENV	290	Wastewater Treatment Technology	6
ENV	291	Wastewater Treatment Technology Lab	2

Electives:

ENV	293	Special Problems I	(1)
ENV	295	Special Problems II	(2)
ENV	297	Special Problems III	(3)
		Total Credits	**20**

Wastewater Treatment Plant Operator - 1505073049

CPU	100	Introduction to Computers	3
ENV	100	Environmental Mathematics	3
ENV	110	Introduction to Environmental Technology	4
ENV	111	Environmental Sampling Techniques Lab	2
ENV	120	Environmental Chemistry	3
ENV	121	Environmental Chemistry Lab	1
ENV	140	Geology, Hydrology and Soils	4
ENV	141	Geology, Hydrology and Soils Lab	2
ENV	270	Treatment and Disposal Technologies	3
ENV	290	Wastewater Treatment Technology	6
ENV	291	Wastewater Treatment Technology Lab	2
TEC	200	Technical Communications	3

Electives:

ENV	293	Special Problems I	(1)
ENV	295	Special Problems II	(2)
ENV	297	Special Problems III	(3)
		Total Credits	**36**

Water Treatment Plant Attendant - 1505073059

ENV	110	Introduction to Environmental Technology	4
ENV	111	Environmental Sampling Techniques Lab	2
ENV	140	Geology, Hydrology and Soils	4
ENV	141	Geology, Hydrology and Soils Lab	2
ENV	280	Water Treatment Technology	6
ENV	281	Water Treatment Technology Lab	2

Electives:

ENV	293	Special Problems I	(1)
ENV	295	Special Problems II	(2)
ENV	297	Special Problems III	(3)
		Total Credits	**20**

Water Treatment Plant Operator - 1505073069

CPU	100	Introduction to Computers	3
ENV	100	Environmental Mathematics	3
ENV	110	Introduction to Environmental Technology	4
ENV	111	Environmental Sampling Techniques Lab	2
ENV	120	Environmental Chemistry	3
ENV	121	Environmental Chemistry Lab	1
ENV	140	Geology, Hydrology and Soils	4
ENV	141	Geology, Hydrology and Soils Lab	2
ENV	270	Treatment and Disposal Technologies	3
ENV	280	Water Treatment Technology	6
ENV	281	Water Treatment Technology Lab	2
TEC	200	Technical Communications	3

Electives:

ENV	293	Special Problems I	(1)
ENV	295	Special Problems II	(2)
ENV	297	Special Problems III	(3)
		Total Credits	**36**

Equine Studies

The Equine Studies Program prepares students for entrance into the equine workforce with a focus on the thoroughbred racing industry. A core curriculum provides students with a foundation of knowledge applicable to any career in the equine workforce. Students will learn the basics of horse care, anatomy and physiology, lameness, health and nutrition and equine business principles. Students will also learn all aspects of the equine industry as it relates to the thoroughbred industry including organizations, regulations, and the life skills necessary for successful careers in the industry.

The program of study provides a foundation of education and training geared toward the expectations of employers in the equine/thoroughbred industries within two degree areas: Jockey Track and Horseman Track. Imbedded within the curriculum for each track are diplomas and certificates that provide the basic foundational skills for entry or mid-level employment in the respective area of the industry.

Jockey Track degree and diploma graduates will have the knowledge and skills for a career as a professional rider. Students will learn principles of balance as it relates to efficient racehorse exercise; proper position and use of hands, arms, feet, legs, back and head when riding or exercising a racehorse; requirements for advancing to a professional jockey career; and life skills necessary to be a professional racehorse rider or jockey. Imbedded within the Jockey Track curriculum is the Exercise Rider Certificate that provides basic skills and techniques to prepare the student to become a professional exercise rider.

Horseman Track graduates will have the knowledge and skills for a career in the equine/thoroughbred workforce such as grooms, assistant trainers, racing officials, farm management, bloodstock agents and other professions in the racing and breeding industries. Students will learn the principles and techniques as they relate to the breaking, prepping and training of horses; health and nutrition; equine management; and life skills necessary to be a professional in the equine/thoroughbred workforce. Imbedded in the Horseman Track curriculum is the Racehorse Care and Breaking Certificate to provide students with the basics of horse care and principles and techniques as they relate to the breaking and prepping of horses.

Other Certificates:

The Equine Industry Workforce Certificate will prepare students for entry level careers in the equine industry. Students will learn the basics of equine studies, equine physiology, and care of the racehorse. Lecture classes will be provided online through BCTC/NARA, while the hands-on laboratory work associated with the courses may be offered by BCTC/NARA or in partnerships with other KCTCS colleges and racecourses within their districts.

The Veterinary Assistant Certificate will prepare students for application into the AAS in Veterinary Technology program at Morehead State University. Students will receive a core of general education courses, as well as an introduction to animal sciences and physiology. The racehorse care class and one credit hour of co-operative education in a local veterinary clinic will provide the student with the work experience/job shadowing hours typically required for consideration of acceptance into a Veterinary Technology program.

Associate in Applied Science

Equine Studies - 0105077019

(Offered at BLC)

General Education:

		Quantitative Reasoning	3
		Natural Sciences	3
		Social/Behavioral Sciences	3
		Heritage/Humanities	3
		Written Communication	3
		Total General Education Requirements	**15**

Technical Core:

		Computer/Digital Literacy	0-3
EQS	101	Introduction to the Thoroughbred	3
EQS	103	Racehorse Care	1
EQS	104	Racehorse Care Lab	3
EQS	110	Basic Equine Physiology	3
EQS	125	Equine Nutrition	3
EQS	130	Introduction to the Racing Industry	3
EQS	200	Lameness in Racehorses	3
EQS	240	Equine Legal and Business Principles	3
		Technical Electives	6
		Total Technical Core	**28-31**

Jockey Track - 010507701

(Offered at BLC)

EQS	111	Introduction To Riding Racehorses	1
EQS	112	Racehorse Riding Skills I	4
EQS	113	Racehorse Riding Skills II	4
EQS	212	Racehorse Riding Principles	3
EQS	213	Racehorse Riding Techniques	2
EQS	215	Life Skills for Jockeys	3
		Subtotal Jockey Track	**17**
		Total Jockey Track AAS	**60-63**

Horseman Track - 010507702

(Offered at BLC)

EQS	118	Equine Bloodstock	3
EQS	121	Introduction to Breaking and Training Racehorses	1
EQS	122	Yearling Breaking and Training	3
EQS	123	Breaking and Prepping Two Year Olds	3
EQS	223	Training Principles and Practices	4
EQS	225	Life Skills for Horsemen	3
		Subtotal Horseman Track	**17**
		Total Horseman Track	**60-63**

Approved Technical Electives

Any EQM or EQS course from alternate track. Six (6) credit hours of electives must be taken from the approved list. This list is not all inclusive. Other technical elective courses may be taken with approval of the program advisor/faculty.

SPA	101	Elementary Spanish	4
EQM	120	Introduction to Commercial Breeding Practices	3
EQS	118	Equine Bloodstock	3
EQS	299	Equine Cooperative Education (internship)	1-9

Diplomas

Equine Studies - 0105074019

(Offered at BLC)

General Education Core

Area I	(Written Communication /Oral Communications, or Humanities/Heritage)	3
Area II	(Social/Behavioral Sciences, Natural Sciences, or Quantitative Reasoning)	3
	General Education Total	6

Technical Core

		Computer/Digital Literacy	0-3
EQS	101	Introduction to the Thoroughbred	3
EQS	103	Racehorse Care	1
EQS	104	Racehorse Care Lab	3
EQS	110	Basic Equine Physiology	3
EQS	125	Equine Nutrition	3
EQS	130	Introduction to the Racing Industry	3
EQS	200	Lameness in Racehorses	3
EQS	240	Equine Legal and Business Principles	3
EQS	299	Equine Cooperative Education (1 credit hour min required in diploma. Additional credits may count toward elective credits.)	1
		Technical Electives	6
		Total Technical Core	**29-32**

Jockey Track - 010507401

(Offered at BLC)

EQS	111	Introduction to Riding Racehorses	1
EQS	112	Racehorse Riding Skills I	4
EQS	113	Racehorse Riding Skills II	4
EQS	212	Racehorse Riding Principles	3
EQS	213	Racehorse Riding Techniques	2
EQS	215	Life Skills for Jockeys	3
		Subtotal Jockey Track	**17**
		Total Jockey Track Diploma	**52-55**

Horseman Track - 010507402

(Offered at BLC)

EQS	118	Equine Bloodstock	3
EQS	121	Introduction to Breaking and Training Racehorses	1
EQS	122	Yearling Breaking and Training	3
EQS	123	Breaking and Training Yearlings/Two Year Olds	3
EQS	223	Training Principles and Practices	4
EQS	225	Life Skills for Horsemen	3
		Subtotal Horseman Track	**17**
		Total Horseman Track	**52-55**

Approved Technical Electives

Any EQM or EQS course from alternate track. Six (6) credit hours of electives must be taken from the approved list. This list is not all inclusive. Other technical elective courses may be taken with approval of the program advisor/faculty.

SPA	101	Elementary Spanish	4
EQM	120	Introduction to Commercial Breeding Practices	3
EQS	118	Equine Bloodstock	3
EQS	299	Equine Cooperative Education (internship)	1-9

Certificate

Exercise Rider - 0105073019

(Offered at BLC)

EQS	101	Introduction to the Thoroughbred	3
EQS	103	Racehorse Care	1
EQS	104	Racehorse Care Lab	3
EQS	110	Basic Equine Physiology	3
EQS	111	Introduction to Riding Racehorses	1
EQS	112	Racehorse Riding Skills I	4
EQS	113	Racehorse Riding Skills II	4
EQS	130	Introduction to the Racing Industry	3
		Total Credits	**22**

Racehorse Care and Breaking - 0105073049

EQS	101	Introduction to the Thoroughbred	3
EQS	103	Racehorse Care	1
EQS	104	Racehorse Care Lab	3
EQS	110	Basic Equine Physiology	3
EQS	121	Introduction to Breaking and Training Racehorses	1
EQS	123	Breaking and Prepping Two Year Olds	3
EQS	125	Equine Nutrition	3
EQS	130	Introduction to the Racing Industry	3
		Total Credits	**20**

Equine Industry Workforce - 0105073039

(Offered at BLC)

EQS	101	Introduction to the Thoroughbred	3
EQS	103	Racehorse Care	1
EQS	104	Racehorse Care Lab OR	3
EQS	299	Equine Co-op	(3)
EQS	110	Basic Equine Physiology	3
EQS	130	Introduction to the Racing Industry	3
EQS	200	Lameness in Racehorses	3
		Total Credits	**16**

Veterinary Assistant - 0105073059

(Offered at BLC, MYC)

ENG	101	Writing I	3
BIO	112	Introduction to Biology	3
CHE	140	Introductory General Chemistry	3
CHE	145	Introductory General Chemistry Lab	1
COM	181	Basic Public Speaking	3
MAT	116	Technical Mathematics	3
AGR	240	Introduction to Animal Science	3
EQS	103	Racehorse Care	1
EQS	104	Racehorse Care Lab	3
EQS	110	Basic Equine Physiology	3
EQS	299	Equine Co-op	1
		Total Credits	**27**

Exercise Science

The Personal Trainer Certificate Program is comprised of American Council on Exercise (ACE) curricula, and will provide real-world experiences, skills, and knowledge needed to assess, design, and implement a personalized exercise program for clients. Graduates are eligible to take the ACE Personal Trainer Exam to become ACE-certified personal trainers.

Certificate

Personal Trainer – 5109993029

(Offered at BSC)

MIT	103	Medical Office Terminology OR	3
CLA	131	Medical Terminology from Greek and Latin OR	(3)
AHS	115	Medical Terminology	(3)
CPR	100	CPR for the Healthcare Professional	1
SFA	100	Safety and First Aid	1
BAS	200	Small Business Management OR	3
BAS	288	Personal and Organizational Leadership	(3)
MSG	100	Musculoskeletal Anatomy and Physiology OR	4
BIO	135	Basic Anatomy and Physiology with Laboratory	(4)
KHP	150	Personal Health Behavior	3
KHP	160	Personal Nutrition and Fitness	3
KHP	225	Exercise Techniques and Physical Training	3
KHP	235	Personal Trainer Practicum	2
		Total Credits	**23**

Financial and Customer Services

This certificate is designed to provide students with the financial, communication, and customer service skills necessary to be successful in the global financial services market. The certificate will require four primary areas of study including two fundamental courses, Spanish and customer service, and two courses in finance and communication, which enable different areas of emphasis.

Certificate

Financial and Customer Services Certificate – 5208033019

(Offered at OWC)

SPA	101	Elementary Spanish	4
QMS	201	Customer Service Improvement Skills	3
OST	235	Business Communication Technology OR	3
COM	252	Introduction to Interpersonal Communication	(3)
BAS	120	Personal Finance OR	3
BAS	294	Money and Financial Institutions	(3)
		Total Credits	**13**

Fire/Rescue Science Technology

Fire/Rescue Science Technology:

If you are interested in a career in the fire service, the Fire/Rescue Science Technology Program will prepare you for the challenges facing today's emergency responders. In the program you will learn the skills of fire suppression and prevention, technical rescue, hazardous materials, emergency medical care, and leadership. This program is beneficial whether you are seeking a career in emergency services (Fire, Rescue, EMS or Emergency Management) or if you are already involved in providing fire, rescue or EMS services in your community.

Students may enter the program with or without experience in emergency services. The degree, certificate, and diploma programs that are offered can help you in obtaining employment in various emergency service fields, or if you are already a firefighter, help you get that promotion you have been waiting for. Classes are offered through State Fire/Rescue Training and may be offered in various formats such as: Web courses, hybrid courses, and traditional classroom offerings. For more information regarding this program, contact your local State Fire/Rescue Training Area Office or see the list of contacts on page 69.

Emergency Medical Technician Certificate:

Students in the Emergency Medical Technician program are instructed in the proper care of sick and injured patients. Students are trained to treat victims suffering from traumatic and medical emergencies such as broken bones, puncture wounds, cardiac, and respiratory emergencies, vehicle accidents and more. This course meets the standards set forth by the US Department of Transportation National Standard Curriculum for EMT-Basic and the Kentucky Board of Emergency Medical Services. Students that successfully complete the course and its requirements will be awarded a certificate for Emergency Medical Technician, and will be prepared to challenge the certification examination process set forth by the Kentucky Board of Emergency Medical Services.

Associate in Applied Science

Fire/Rescue Science Technology - 4302037019

(Offered at ASC, BLC, BSC, ELC, GTW, JFC, MDC, MYC, OWC, SKY, SMC,WKC)

General Education:

		Heritage/Humanities	3
		Quantitative Reasoning	3
		Natural Sciences	3
		Social/Behavioral Sciences	3
		Written Communication	3
		Subtotal	**15**

Technical Courses:

		Computer/Digital Literacy	0-3
FRS	101	Introduction to Fire Service	3
FRS	102	Firefighters Basic Skills I	3
FRS	103	Firefighters Basic Skills II	3
FRS	104	Firefighters Intermediate Skills I	3
FRS	105	Firefighters Intermediate Skills II	3
FRS	201	Firefighters Advanced Skills I	3
FRS	202	Firefighters Advanced Skills II	3
FRS	203	Firefighters Advanced Skills III	3
FRS	204	EMT First Responder	3
FRS	205	Fire Officer I	5
FRS	206	Fire Officer II	8
FRS	207	Fire Officer III	6
		Subtotal	**46-49**
		Total Credits	**61-64**

NOTE: All FRS courses are available in modules; see course description section.

Diploma

Fire Chief - 4302034039

(Offered at ASC, BLC, ELC, GTW, JFC, MDC, MYC, OWC, SKY, SMC,WKC)

General Education:

Area 1		Written Communication, Oral Communications, or Humanities/Heritage	3
Area 2		Social/Behavioral Sciences, Natural Sciences, or Quantitative Reasoning	3
		Subtotal	**6**

Technical Courses:

		Computer/Digital Literacy Course OR demonstrated competency	0-3
FRS	101	Introduction to Fire Service	3
FRS	102	Firefighters Basic Skills I	3
FRS	103	Firefighters Basic Skills II	3
FRS	104	Firefighters Intermediate Skills I	3
FRS	105	Firefighters Intermediate Skills II	3
FRS	201	Firefighters Advanced Skills I	3
FRS	202	Firefighters Advanced Skills II	3
FRS	203	Firefighters Advanced Skills III	3
FRS	204	EMT First Responder	3
FRS	205	Fire Officer I	5
FRS	206	Fire Officer II	8
FRS	207	Fire Officer III	6
		Subtotal	**46-49**
		Total Credits	**52-55**

NOTE: All FRS courses are available in modules; see course description section.

Certificate

Basic Firefighter - 4302033019

(Offered at ASC, BLC, BSC, ELC, GTW, JFC, MDC, MYC, OWC, SKY, SMC,WKC)

FRS	101	Introduction to Fire Service	3
FRS	102	Firefighters Basic Skills I	3
FRS	103	Firefighters Basic Skills II	3
FRS	104	Firefighters Intermediate Skills I	3
		Total Credits	**12**

NOTE: All FRS courses are available in modules; see course description section.

Advanced Firefighter - 4302033029

(Offered at ASC, BLC, BSC, ELC, GTW, JFC, MDC, MYC, OWC, SKY, SMC,WKC)

FRS	101	Introduction to Fire Service	3
FRS	102	Firefighters Basic Skills I	3
FRS	103	Firefighters Basic Skills II	3
FRS	104	Firefighters Intermediate Skills I	3
FRS	105	Firefighters Intermediate Skills II	3
FRS	201	Firefighters Advanced Skills I	3
FRS	202	Firefighters Advanced Skills II	3
FRS	203	Firefighters Advanced Skills III	3
		Total Credits	**24**

NOTE: All FRS courses are available in modules; see course description section.

Fire Officer - 4302033039

(Offered at ASC, BLC, BSC, ELC, JFC, MDC, MYC, OWC, SKY, SMC,WKC)

FRS	2051	Fire Prevention, Public Education and Fire Cause Determination II	0.5
FRS	2052	Firefighter Survival and Rescue	1.1
FRS	2053	Hazardous Materials Technician	3.4
FRS	2062	Managing Company Tactical Operations: Decision Making	1.0
FRS	2063	Instructional Techniques for Company Officers	1.0
FRS	2071	Company Officer	3.5
FRS	2072	Incident Command System (ICS)	0.9
FRS	2073	Leadership I: Strategies for Company Success	0.8
FRS	2074	Fire/Arson Detection (Arson I)	0.8
		Total Credits	**13**

NOTE: All FRS courses are available in modules; see course description section.

Emergency Medical Technician - 5109042010

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

FRS	2061	Emergency Medical Technician	6
		Total Credits	**6**

NOTE: Contact faculty concerning pre-requisites.

General Occupational/Technical Studies

The Associate in Applied Science degree in General Occupational/Technical Studies provides flexible alternatives for meeting student and employer needs. This program serves two general purposes: 1) Individualized program – provides a flexible curriculum that can be designed to meet specifics student and workplace needs, and 2) Degree completion – provides a structure through which credit may be granted for significant prior learning experiences in occupational/technical areas.

Credit earned through certificate and diploma program completion will be applicable toward the Associate in Applied Science in General Occupational/Technical Studies degree when consistent with the objectives of the student's individual plan of study. This heavily advisor-driven model can combine certificates and/or diplomas in different disciplines for meeting employer needs for unique skill combinations for which there is no established degree program. As much as twenty hours of credit

for experiential learning may be applied toward degree completion. KCTCS certificate and diploma credit and acceptable credit transferred from other colleges may also be applied to a student's program completion plan. At least 25 percent of the approved curriculum credits must be completed at the KCTCS institution granting the degree.

Associate in Applied Science

General Occupational/Technical Studies - 3099997017

(Offered at ASC, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)
Available Completely Online

General Education Component Minimum[3]

Quantitative Reasoning	3
Natural Sciences	3
Social/Behavioral Sciences	3
Heritage/Humanities	3
Written Communication	3
Additional General Education Coursework	0-5
Subtotal	**15- 20**

Technical Component Minimum[3]

Computer/Digital Literacy (Computer/Digital literacy must be demonstrated either by competency exam or by completing a computer/digital literacy course)[1]	0-3
Technical Courses[2]	45-50
Subtotal	**45- 53**
Total Credits	**60-68**

NOTE:

[1]If computer/digital literacy is demonstrated by a competency exam, an additional three credit hour course is required.

[2]The student must have a plan of study on file in the academic affairs office.

[3]A combination of general education and technical courses should not exceed 68 credits.

Geospatial Technology

The rapidly growing field of Geospatial Technologies (GST) enables users of spatial data the ability to make informed decisions. GST utilizes both time and place as analysis factors. GST is recognized by the U.S. Department of Labor as a high growth, high wage, green industry with a bright outlook. Completers of the certificate will have the skills for employment in GST or associated fields such as Unmanned Aircraft System, agriculture, remote sensing, geospatial intelligence, environmental science, crime analysis, and/or demographics.

Certificate

Applications of Geospatial Technology – 4507023029

(Offered at)

CIT	125	Introduction to GIS	3
CIT	225	GIS Software Tools	3
GIS	145	Remote Sensing	3
GIS	255	Geospatial Programming	3
GIS	260	Geospatial Web Mapping	3
		Total Credits	**15**

Global Studies

The Associate of Applied Science Degree in Global Studies (Transfer) is designed to prepare students to be more globally aware and globally literate employees and citizens of the Commonwealth of Kentucky, the United States, and the world. It exposes students to a diverse set of courses and competencies which will prepare them to live and work in settings with diverse ethnic and cultural populations and to function more effectively as members of an increasingly interconnected world.

Associate in Applied Science

Global Studies - 3020017019

(Offered at JFC)

Global Studies

ENG	101	Writing I[1] AND	3
ENG	102	Writing II[1] OR	3
ENG	105	Writing: An Accelerated Course[1] and	(3)
		Global Studies Humanities/Fine Arts[2]	(3)
MAT	146	Contemporary College Mathematics[1] OR	3
MAT	150	College Algebra[1]	(3)
		Natural Sciences[1]	3-4
		Social/Behavioral Sciences[1]	3
		Heritage/Humanities[1]	3
		Computer/Digital Literacy[3]	3
COM	254	Introduction to Intercultural Communication[1]	3
		Foreign Language[1]	8
		One Study Abroad/Overseas Experience course (HRS 200, IES 235 or other Study Abroad course from a non-KCTCS accredited higher education institution)	3
		Global Studies Heritage[4]	6
		Global Studies Humanities/Fine Arts[2]	6
		Global Studies Natural Science/Business[5]	6-7
		Global Studies Social Interaction[6]	6
GBS	290	Global Studies Capstone Course	3
		Total	**62-64**

[1] General Education

[2] Select from Global Studies Humanities/Fine Arts list.

[3] Students who pass the computer/digital literacy exam in lieu of completing an approved computer/digital literacy course must take an additional three (3) credits of Global Studies credit from the approved Global Studies course lists.

[4] Select from Global Studies Heritage list.

[5] Select from Global Studies Natural Science list.

[6] Select from Global Studies Social Interaction list.

Certificate

Global Studies - 3020013010

(Offered at ELC, JFC)

COM	254	Introduction to Intercultural Communication	3
		Foreign Language	4
		Global Studies Heritage[4]	3
		Global Studies Humanities/Fine Arts[2]	3
		Global Studies Natural Science/Business[5]	3
		Global Studies Social Interaction[6]	3
		Total	**19**

[2] Select from Global Studies Humanities/Fine Arts list.

[4] Select from Global Studies Heritage list.

[5] Select from Global Studies Natural Science list.

[6] Select from Global Studies Social Interaction list.

Health Care Foundations

This certificate will prepare entry-level health care workers with basic health care knowledge and skills in the areas of health care delivery and management, health care communication, basic skills I & II, pharmacology, clinical pathophysiology and medical terminology.

Certificate

Health Care Foundations-Basic - 5100003030

(Offered at ASC, JFC)

HST	101	Health Care Basic Skills I OR	3
HST	104	Health Care Basic Skills I with Clinical	(3.5)
HST	102	Health Care Delivery & Management	3
HST	103	Health Care Communication	2
AHS	115	Medical Terminology	3
		Subtotal	**11-11.5**

Health Care Foundations-Intermediate - 5100003020

(Offered at ASC, JFC)

HST	101	Health Care Basic Skills I OR	3
HST	104	Health Care Basic Skills I with Clinical	(3.5)
HST	102	Health Care Delivery & Management	3
HST	103	Health Care Communication	2
AHS	115	Medical Terminology	3
HST	121	Pharmacology	2
HST	122	Clinical Pathophysiology	3
HST	123	Health Care Basic Skills II	2
		Subtotal	**18-18.5**

Health Information Technology

This program prepares the graduate to take an active role in the field of health information management. Graduates will interact with physicians, health professionals, and financial and administrative staffs to ensure the protection of information systems. Graduates will help determine health information budgets, resources and policies, utilizing current and accurate data. The curriculum includes course work in the supporting sciences and general education areas. Classroom instruction is supplemented with learning experiences in the campus laboratory and in area health care facilities. Students enrolled in the Health Information Program are required to achieve a minimum grade of "C" in each course in the program.

Health Information Technicians are employed in hospitals, medical clinics, nursing homes, other health care facilities and industry. Graduates with the AAS degree are qualified to write the American Health Information Management Association's / Commission on Certification for Health Informatics and Information Management (CCHIIM) Registered Health Information Technician examination and the CCA coding examination. Graduates of the medical records coding specialist certificate may write the American Health Information Management Association's CCA coding examination and the American Academy of Professional Coders' CPC-A (and others as qualified) coding examinations.

Documentation of computer literacy as defined by KCTCS is required prior to enrolling in the first HIT course.

The Associate in Applied Science Degree Health Information Technology Program at Jefferson Community and Technical College is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). Additional information may be found at CAHIIM's website URL: http://cahiim.org.

Associate in Applied Science

Health Information Technology - 5107077019

(Offered at BLC, GTW, HZC, JFC)

General Education Requirements:

ENG	101	Writing I	3
ENG	102	Writing II	3
COM	181	Basic Public Speaking OR	3
COM	252	Introduction to Interpersonal Communications	(3)
BIO	135	Human Anatomy and Physiology with laboratory OR	4
BIO	137	Human Anatomy and Physiology I AND	(4)
BIO	139	Human Anatomy and Physiology II	(4)
MAT	110	Applied Mathematic OR	3
MAT	150	College Algebra	(3)
PSY	110	General Psychology OR	3
SOC	101	Introduction to Sociology	(3)
		Heritage/Humanities	3
		Subtotal	**22-26**

Technical Course Requirements:

CLA	131	Medical Terminology from Greek or Latin OR	3
MIT	103	Medical Office Terminology OR	(3)
AHS	115	Medical Terminology	(3)
HIT	100	Introduction to Healthcare Delivery Systems	3
HIT	105	Patho/Pharm for Health Information Professionals	4
CIT	130	Productivity Software OR	3
OST	240	Software Integration	(3)
HIT	109	Clinical Classification Systems I	4
HIT	110	Legal/Ethical Issues in Health Information	2
HIT	112	Reimbursement Methodologies	3
HIT	200	Information Systems in Healthcare	3
HIT	202	Clinical Classification Systems II	3
HIT	205	Performance Improvement in Health Information	3
HIT	207	Clinical Classification Systems III	3
HIT	211	Health Care Management & Statistics	3
HIT	2151	Clinical Practicum I AND	2
HIT	2152	Clinical Practicum II	2
		Subtotal	**41**
		Total Credits	**63-67**

NOTE: BIO 137 and BIO 139 are required at JCTC.

Certificate

Medical Record Coding Specialist- 5107073019

(Offered at GTW, JFC)

CLA	131	Medical Terminology from Greek or Latin OR	3
MIT	103	Medical Office Terminology OR	(3)
AHS	115	Medical Terminology	(3)
BIO	135	Human Anatomy and Physiology with laboratory OR	4
BIO	137	Human Anatomy and Physiology I AND	(4)
BIO	139	Human Anatomy and Physiology II	(4)
HIT	100	Introduction to Health Information Technology	3
HIT	105	Patho/Pharm for Health Information Professionals	4
HIT	109	Clinical Classification Systems I	4
HIT	110	Legal/Ethical Issues in Health Information	2
HIT	112	Reimbursement Methodologies	3
HIT	202	Clinical Classification Systems II	3
HIT	207	Clinical Classification Systems III	3
HIT	215	Clinical Practicum OR	4
HIT	2151	Clinical Practicum I	(2)
		Total Credits	**31-37**

Release of Information Data Specialist – 5107073039

(Offered at GTW, JFC)

HIT	100	Introduction to Health Information Technology	3
HIT	110	Legal/Ethical Issues in Health Information	2
		Total Credits	**5**

Health Physics

The Health Physics program is designed to prepare students to conduct health physics activities in a variety of occupational and environmental settings. Students will study the basic properties of radiation including its origin, its interactions with matter, and radiation detection procedures. Rules and regulations governing human exposure to occupational radiation health hazards are covered. Emphasis is placed on the proper use of survey instrumentation to detect and measure occupational radiation health hazards, the equipment and techniques employed to conduct work-place and environmental surveys, and the current technologies used in hazard control. The Radiation Control Technician certificate prepares students for employment in a Department of Energy (DOE) facility. The AAS degree in Health Physics prepares the graduate for the National Registry of Radiation Protection Technologists examination and for employment at a nuclear facility.

Associate in Applied Science

Health Physics - 5122057019

General Education Courses

PHY	152	Introduction to Physics OR higher level Physics course	3
CHE	140	Introductory General Chemistry	3
CHE	145	Introductory General Chemistry Laboratory	1
BIO	112	Introduction to Biology	3
BIO	113	Introduction to Biology Lab	1
MAT	150	College Algebra or higher level Quantitative Reasoning course	3
ENG	101	Writing I	3
ENG	102	Writing II	3
COM	181	Basic Public Speaking OR	3
COM	252	Introduction to Interpersonal Communication	(3)
		Social/Behavioral Sciences	3
		Heritage/Humanities	3
		Subtotal	**29**

Technical Courses

		Computer/Digital Literacy*	0-3
HPH	101	Health Physics I	3
HPH	102	Health Physics II	3
HPH	120	Radiation Biology	3
HPH	201	Nuclear Instrumentation and Measurement I	4
HPH	202	Nuclear Instrumentation and Measurement II	4
HPH	246	Environmental Law	2
ISX	100	Industrial Safety	3
QMS	101	Introduction to Quality Systems	3
ITE	250	Team Dynamics and Problem Solving	3
BAS	287	Supervisory Management	3
		Subtotal	**31-34**
		Total Credits	**60-63**

*Computer/Digital literacy must be demonstrated either by competency exam or by completing a computer/digital literacy course.

Certificate

Radiation Control Technician - 5122053039

(Offered at WKC)

HPH	100	Health Physics Fundamentals	3
HPH	101	Health Physics I	3
HPH	102	Health Physics II	3
HPH	201	Nuclear Instrumentation and Measurement I	4
HPH	202	Nuclear Instrumentation and Measurement II	4
		Total Credits	**17**

Health Science Technology

The Health Science Technology (HST) program is designed to prepare students for entry-level career opportunities in the field of healthcare and health-related services. The program is designed for those students who seek entry level jobs as well as for the currently employed individual wishing to broaden skills for career enhancement. Graduates will possess marketable skills sets for direct services as well as the foundation needed to understand current health care delivery. Many of the general education and core courses are required for completion of varied professional health programs. Examples include diagnostic medical sonography, medical assisting, nursing, physical therapy assistant, radiography, respiratory care, and surgical technology. The HST provides a smooth transition or career pathway to an Allied Health or nursing selective admission program once a student is accepted.

A grade of "C" or better is required in each biological science and quantitative reasoning course.

Associate in Applied Science

Health Science Technology – 5100007019

(Offered at ASC, BSC, HPC, JFC, MDC,WKC)

General Education

MAT	150	College Algebra and Functions OR	3
MAT	110	Applied Math	(3)
ENG	101	Writing I	3
FYE	105	Achieving Academic Success	3
BIO	135	Basic Human Anatomy OR	4
BIO	137	Human Anatomy & Physiology I AND	(4)
BIO	139	Human Anatomy & Physiology II	(4)
PSY	110	General Psychology	3
		Social/Behavioral Sciences	3
		Heritage/Humanities	3
		Oral Communications	3
		Subtotal	**25-29**

Technical Core:

CLA	131	Medical Terminology from Greek and Latin OR	3
AHS	115	Medical Terminology OR	(3)
MIT	103	Medical Office Terminology	(3)
NAA	100	Nursing Assistant Skills I	3
		Digital Literacy#	0-3
		Health Science Technical Courses**	29-30
		Subtotal	**35-39**
		Total	**60-68**

#Digital Literacy must be demonstrated by computer exam or successfully completing a digital literacy course.

**Health Science Technical Course selection must result in final attainment of a minimum of three (3) certificate credentials.

Students may be able to earn certificates that are already present in other curricula, including but not limited to:

Nursing Assistant	Pharmacy Technician I
Advanced Nursing Assistant	Medical Coding
Phlebotomy for the Healthcare Worker	Medical Office Radiology

Student may take the following courses to meet the required 60 credit hours needed for the Health Science Technology degree:

AHS 100	BIO 137	EFM 100	HST 122	PHY 172
AHS 105	BIO 139	HST 101	HST 123	PLW 130
AHS 115	BIO 225	HST 102	NAA 102	PLW 135
AHS 201	CIT 105	HST 103	OST 110	PLW 140
AHS 203	COM 181	HST 104	PHY 152	TEC 200
BAS 120	COM 252	HST 121	PHY 171	WPP 200

Healthcare Facilities Leadership

The Healthcare Facilities Leadership program prepares students for a highly innovative and rapidly changing professional career as a Healthcare Facilities Leader/Manager. Students receive an education in office and hospital procedures, client relations and communications, leadership, finances, energy management, public speaking, construction, infection control, maintenance operations, and codes and compliance. This knowledge can be used to gain employment locally, regionally, or nationally. Overall, the students in this program receive an education that provides marketable skills, preparing them to be employed in a high demand profession.

Associate in Applied Science

Healthcare Facilities Leadership – 5107997019

(Offered at OWC)

General Education Courses

ENG	101	Writing I	3
MAT	150	College Algebra or Higher Level Quantitative Reasoning Course	3
PHI	110	Medical Ethics	3
HFL	100	Introduction to Healthcare Facility Management	3
HFL	110	Introduction to Healthcare Industry	2
HFL	120	Infection Control and Prevention	2
HFL	130	Compliance, Codes, and Standards I	3
HFL	140	Maintenance and Operations I	3
HFL	150	Planning, Design, and Construction I	3
CHE	170	General College Chemistry I AND	3
CHE	175	General College Chemistry I Lab OR	1
BIO	112	Introduction to Biology AND	(3)
BIO	113	Introduction to Biology Lab	(1)
COM	181	Basic Public Speaking	3
ESP	101	Introduction to Energy Systems	3
HFL	230	Compliance, Codes, and Standards II	3
HFL	240	Maintenance and Operations II	3
HFL	250	Planning, Design, and Construction II	3
HFL	260	Healthcare Facilities Leadership Capstone I	3
HFL	270	Healthcare Facilities Leadership Capstone II	3
BAS	287	Supervisory Management OR	3
BAS	289	Operations Management	(3)
BAS	212	Introduction to Financial Management	3
ECO	201	Principles of Microecomonics	3
BAS	288	Personal and Organizational Leadership	3
		Digital Literacy or Elective (if Digital Literacy is satisfied)	3
		Total Credits	**65**

Heavy Equipment Operation

Designed to instruct students in the safe operation of heavy equipment, e.g., bulldozers, backhoes, front-end loaders, hydraulic excavators and graders. Instruction in digging, ditching, sloping, stripping, grading, back filling, clearing trees and rubble, and foundation excavating is provided as well as instruction in the proper care and maintenance of equipment.

Diploma

Operating Engineer - 4902024019

(Offered at HZC, SEC)

General Education:

Area 1=	Written Communication, Oral Communications, or Heritage/Humanities	3
Area 2=	Social/Behavioral Sciences, Natural Sciences, or Quantitative Reasoning*	3
	Subtotal	6

*MAT 116 or higher level Quantitative Reasoning course required at SEC

Technical Courses:

		Digital Literacy	0-3
ISX	100	Industrial Safety	3
DIT	103	Preventive Maintenance Lab	2
HEO	151	Heavy Equipment Operating I	6
HEO	201	Heavy Equipment Operating II	6
HEO	251	Heavy Equipment Operating III	6
HEO	125	Special Problems I	3
HEO	225	Special Problems II	3
		Total Technical Credits	**29-32**
		Total Credits	**35-38**

Certificates

Backhoe Operator - 4902023069

(Offered at HZC, SEC,WKC)

HEO	110	Power Shovel Backhoe Operator	7
DIT	103	Preventive Maintenance Lab	2
HEO	125	Special Problems I	3
		Total Credits	**12**

Bulldozer Operator- 4902023029

(Offered at HZC, SEC,WKC)

HEO	111	Bulldozer Operator	7
DIT	103	Preventive Maintenance Lab	2
HEO	125	Special Problems I	3
		Total Credits	**12**

Front-End Loader Operator - 4902023079

(Offered at HZC, SEC,WKC)

HEO	107	Utility Tractor Loader Operator	7
DIT	103	Preventive Maintenance Lab	2
HEO	125	Special Problems	3
		Total Credits	**12**

Motor-Grader Operator - 4902023049

(Offered at HZC, SEC,WKC)

HEO	106	Motor-Grader Operator	7
DIT	103	Preventive Maintenance Lab	2
HEO	125	Special Problems	3
		Total Credits	**12**

Hydraulic Excavator Operator - 4902023059

(Offered at HZC, SEC,WKC)

HEO	151	Heavy Equipment Operating I	6
HEO	115	Hydraulic Excavator Operator	7
DIT	103	Preventive Maintenance Lab	2
HEO	125	Special Problems 1	3
		Total Credits	**18**

Historic Preservation Technology

The program will focus on the study of preservation theory coupled with hands-on skill training to meet the needs of entry level individuals and prospective employers involved in the historic preservation field. Researching the background of structures designated as historic properties will enhance the learning experience while applying the Secretary of the Interior's standards for the rehabilitation of historic structures.

Certificates

Historic Preservation Technology – 3012013019

(Offered at JFC)

BRX	220	Blueprint Reading for Construction	3
ACH	120	Theory and History of Architecture I	3
HIS	240	History of Kentucky	3
HPT	100	Introduction to Historic Preservation	3
HPT	101	Introduction to Historic Preservation Lab	2
ISX	100	Industrial Safety OR	3
ISX	101	Introduction to Industrial Safety	(3)
		Technical Electives*	8
		Total	**25**

***Technical Electives: Select a minimum of 8 credit hours**

HPT	120	Traditional Woodworking	2
HPT	200	Masonry Repointing and Repair	2
HPT	202	Window Restoration and Repair	2
HPT	204	Roof Restoration and Repair	2
HPT	298	Field Experience Practicum	2

Homeland Security/ Emergency Management

The degree program includes an overview of homeland security, emergency management and first responder agencies, including but not limited to: Fire Departments, Law Enforcement, and Medical Services and how these agencies function within the National Incident Management System.

Fire Science Track:

This degree track includes fire department organization, fire behavior, firefighter safety, personal protective equipment, portable fire extinguishers, fire hose, appliance and streams.

Criminal Justice Track:

This criminal justice degree track prepares the student for entry into the field of police work and related occupations. Criminal justice vocations have evolved from jobs with minimal requirements to jobs requiring complex knowledge and skills. This curriculum gives the student theory, principles, and techniques employed by criminal justice agencies and police units. The study of the law as it relates to criminal justice agencies, human behavior, government, and communications along with specialized course work comprise the curriculum.

Security Management Track:

The Security Management Coordinator degree track provides a comprehensive overview of physical security policies, procedures and techniques. Topics covered are perimeter protection, intrusion detection, access control, CCTV, security design and surveys, contingency planning, and acts of violence.

Homeland Security/Emergency Management Specialist Certificate:

This certificate program includes an overview of homeland security, emergency management and first responder agencies, including but not limited to: fire departments, law enforcement and emergency medical services and how these agencies function within the National Incident Management System.

Progression in the program is contingent upon achievement of a grade of "C" or better in each technical course for all program tracks above

Associate in Applied Science

Homeland Security/Emergency Management - 4399997019

(Offered at WKC)

General Education Core

		Written Communication	3
		Quantitative Reasoning	3
		Natural Sciences	3
		Social/Behavioral Sciences	3
		Heritage/Humanities	3
		Oral Communications	3
		General Education Core Credit Hour Subtotal	**18**

Technical Core or Support Courses

		Computer/Digital Literacy	0-3
HSM	100	Introduction to Homeland Security	3
HSM	110	Introduction to Emergency Management	3
CRJ	110	Principles of Asset Protection AND	3
CRJ	210	Physical Security Technology & Systems OR	3
LSI	120	Comprehensive Security Specialist AND	(4)
LSI	146	Crisis Management/Contingency Planning	(2)
HSM	225	Issues and Ethics in Homeland Security	3
AHS	140	Introduction to Public and Community Health	3
BAS	212	Introduction to Financial Management	3
FRS	101	Introduction to Fire Science	3
FRS	2061	Emergency Medical Technician	6

NOTE: Computer/Digital Literacy must be demonstrated either by competency exam or by completing a computer/digital literacy course.

Technical Core Subtotal **30-33**

Fire Science Track - 439999701

(Offered at WKC)

FRS	102	Firefighter Basic Skills I	3
FRS	103	Firefighters Basic Skills II	3
FRS	104	Firefighter Intermediate Skills I	3
FRS	105	Firefighters Intermediate Skills II	3
FRS	201	Firefighters Advanced Skills I	3
		Fire Science Track Subtotal	**15**
		Fire Science Track Total Degree Requirements	**63-66**

Criminal Justice Track - 439999702

(Offered at WKC)

CRJ	100	Introduction to Criminal Justice	3
CRJ	204	Criminal Investigations	3
CRJ	215	Introduction to Law Enforcement	3
CRJ	217	Criminal Procedures	3
CRJ	279	Terrorism and Political Violence	3
		Criminal Justice Track Subtotal	**15**
		Criminal Justice Track Total Degree Requirements	**63-66**

Security Management Track - 439999703

LSI	140	Managing Terrorism & Other Crises	1
LSI	150	Professional Locksmithing	4
		Electives	10

A minimum of 3 credit hours must be taken from this list of electives:

LSI	130	GSA: Locks, Vaults & Containers	4
LSI	131	GSA: Locks, Vaults & Containers Certified Inspector Training	1
LSI	151	Basic Safe Penetration	1
LSI	152	Combination Lock Manipulation	1
LSI	153	Safe Lock Servicing – Mechanical and Electronic	2
LSI	160	Fundamentals of Electricity	2
LSI	170	Electronic Access Control	2
LSI	195	Tactical Lock (restricted enrollment)	8
		Security Management Track Subtotal	**15**
		Security Management Track Total Degree Requirements	**63-66**

Certificate

Homeland Security/Emergency Management Specialist - 4399993019

(Offered at JFC,WKC)

HSM	100	Introduction to Homeland Security	3
HSM	110	Introduction to Emergency Management	3
CRJ	110	Principles of Asset Protection OR	3
CRJ	210	Physical Security Technology & Systems OR	3
LSI	120	Comprehensive Security Specialist	(4)
LSI	146	Crisis Management/Contingency Planning	(2)
HSM	225	Issues and Ethics in Homeland Security	3
AHS	140	Introduction to Public and Community Health	3
BAS	212	Introduction to Financial Management	3
FRS	101	Introduction to Fire Science	3
FRS	2061	Emergency Medical Technician	6
		HSEM Specialist Certificate	**30**

Horticulture

The Horticulture program provides students with knowledge and skills needed for careers in greenhouse, nursery, and landscape operations. Students acquire practical experience in turf and landscape maintenance, design, plant production, and business management.

Associate in Applied Science

Horticulture - 0106017019

General Education:

		Quantitative Reasoning	3
		Natural Sciences	3
		Heritage/Humanities	3
		Social/Behavioral Sciences	3
		Written Communication	3
		Subtotal	**15**

Technical Core:

		Computer/Digital Literacy *	0-3
HRT	110	Nursery Management	4
HRT	120	Turf Management OR	4
HRT	160	Retail Floral Design AND	(4)
HRT	161	Retail Floral Design Lab	(2)
HRT	130	Landscape Maintenance	3
HRT	131	Landscape Maintenance Lab	2
HRT	150	Horticulture Business Management	3
HRT	210	Landscape Design	4
HRT	240	Greenhouse Management	4
HRT	241	Greenhouse Management Lab	2
		Subtotal	**26-31**

* Must meet computer/digital literacy requirement.

Science Track - 010601701

		General Education Natural Sciences Course	3
COE	199	Cooperative Education OR	3
COED	198	Practicum	(3)
HRT	104	Introduction to Herbaceous Plants	4
HRT	108	Introduction to Woody Plants	4
		Electives (Horticulture Course List including COE198)	8
		Subtotal	**22**
		Total Science Track Credits	**63-68**

Business Track - 010601702

COE	199	Cooperative Education OR	2
COED	198	Practicum	(2)
ACT	101	Fundamentals of Accounting I	3
BAS	200	Small Business Management	3
BMO	170	Introduction to Business Management	3
OST	215	Office Procedures	3
BAS	267	Introduction to Business Law	3
		Electives (Horticulture Course List including COE198)	3
		Subtotal	**20**
		Total Business Track Credits	**61-66**

Diploma

Landscape Technology - 0106014009

General Education:

Area 1=	Written Communication, Oral Communications, or Heritage/Humanities,	3
Area 2=	Social/Behavioral Sciences, Natural Sciences, or Quantitative Reasoning	3
	Subtotal	**6**

Technical:

		Computer/Digital Literacy*	3
COE	199	Cooperative Education OR	6
COED	198	Practicum	(6)
HRT	104	Introduction to Herbaceous Plants	4
HRT	108	Introduction to Woody Plants	4
HRT	120	Turf Management OR	4
HRT	160	Retail Floral Design AND	(4)
HRT	161	Retail Floral Design Lab	(2)
HRT	130	Landscape Maintenance	3
HRT	131	Landscape Maintenance Lab	2
HRT	210	Landscape Design	4
		Subtotal	**30-32**
		Total	**36-38**

* If computer/digital literacy is met by the competency exam, an additional 3 credit hours of general education or program elective must be taken.

Ornamental Horticulture - 0106014029

(Offered at MYC)

General Education:

Area 1=	Written Communication, Oral Communications, or Heritage/Humanities	3
Area 2=	Social/Behavioral Sciences, Natural Sciences or Quantitative Reasoning	3
	Subtotal	**6**

* If computer/digital literacy is met by the competency exam, an additional 3 credit hours of general education or program elective must be taken.

Technical:

		Computer/Digital Literacy*	3
COE	199	Cooperative Education OR	3
COED	198	Practicum	(3)
HRT	104	Introduction to Herbaceous Plants	4
HRT	108	Introduction to Woody Plants	4
HRT	110	Nursery Management	4
HRT	120	Turf Management OR	4
HRT	160	Retail Floral Design AND	(4)
HRT	161	Retail Floral Design Lab	(2)
HRT	130	Landscape Maintenance	3
HRT	131	Landscape Maintenance Lab	2
HRT	150	Horticulture Business Management	3
HRT	210	Landscape Design	4
HRT	240	Greenhouse Management	4
HRT	241	Greenhouse Management Lab	2
COED	198	Practicum	8
		Subtotal	**48-50**
		Total	**54-56**

Certificates

Greenhouse Operations - 0106013029

(Offered at MYC)

HRT	240	Greenhouse Management	4
HRT	241	Greenhouse Management Lab	2
		Electives (Horticulture Course List)	6
		Total Credits	**12**

Greenhouse Production – 010613019

HRT	104	Introduction to Herbaceous Plants	4
HRT	240	Greenhouse Management	4
HRT	241	Greenhouse Management Lab	2
		Electives (Horticulture Course List including COE198)	8
		Total Credits	**18**

Horticulture Sales - 0106013119

(Offered at MYC)

HRT	108	Introduction to Woody Plants OR	4
HRT	104	Introduction to Herbaceous Plants	(4)
HRT	120	Turf Management OR	4
HRT	160	Retail Floral Design AND	(4)
HRT	161	Retail Floral Design Lab	(2)
HRT	130	Landscape Maintenance	3
HRT	150	Horticulture Business Management	3
		Electives (Horticulture Course List)	1-2
		Total Credits	**15-18**

Landscape Installation - 0106013049

(Offered at MYC)

HRT	108	Introduction to Woody Plants OR	4
HRT	104	Introduction to Herbaceous Plants	(4)
HRT	130	Landscape Maintenance	3
HRT	131	Landscape Maintenance Lab	2
		Electives (Horticulture Course List)	3
		Total Credits	**12**

Landscape Planning - 0106013059

(Offered at MYC)

HRT	104	Introduction to Herbaceous Plants	4
HRT	108	Introduction to Woody Plants	4
HRT	130	Landscape Maintenance	3
HRT	131	Landscape Maintenance Lab	2
HRT	210	Landscape Design	4
		Electives (Horticulture Course List)	5
		Total Credits	**22**

Lawn Maintenance - 0106013069

(Offered at MYC)

HRT	120	Turf Management	4
HRT	130	Landscape Maintenance	3
HRT	131	Landscape Maintenance Lab	2
		Electives (Horticulture Course List)	1
		Total Credits	**10**

Nursery Production - 0106013079

(Offered at MYC)

HRT	108	Introduction to Woody Plants	4
HRT	110	Nursery Management	4
HRT	240	Greenhouse Management	4
		Electives (Horticulture Course List including COE198)	8
		Total Credits	**20**

Nursery Operations - 0106013089

(Offered at MYC)

HRT	108	Introduction to Woody Plants	4
HRT	110	Nursery Management	4
		Electives (Horticulture Course List including COE198)	5
		Total Credits	**13**

Human Services

This program prepares individuals for entry level positions in agencies and institutions which provide social, community, educational and mental health services. The curriculum provides an opportunity for the student to develop the knowledge and skills necessary for entry level employment. Included in the curriculum is a core of human services courses, general education courses, and technical courses with a specific human services emphasis. Application of human services principles and skills is provided through a clinical experience in an appropriate setting.

Upon completion of the program the graduate is prepared to seek employment in various areas which may include child care facilities, mental health settings, chemical dependency settings, hospitals, educational institutions, correctional facilities, geriatric settings, child and youth centers, and social service agencies.

Students obtain a "C" or better in all core classes (HMS 101, HMS 102, HMS 103, HMS 104 and (HMS 249 OR HMS250) and also in the two technical courses that have been selected to complete the core requirements.

Associate in Applied Science

Human Services- 4400007000

(Offered at BLC, BSC, ELC, GTW, HPC, HZC, JFC, MDC, OWC)

General Education:

COM	181	Basic Public Speaking OR	3
COM	252	Introduction to Interpersonal Communications	(3)
ENG	101	Writing I	3
ENG	102	Writing II	3
PSY	110	General Psychology	3
PSY	223	Developmental Psychology	3
SOC	101	Introduction to Sociology	3
		Second Sociology course	3
		Heritage/Humanities course	3
		Quantitative Reasoning course	3
		Natural Sciences	3
		Subtotal	**30**

Technical Core:

CIT	105	Introduction to Computers OR	3
		Approved Digital Literacy Course	(3)
HMS	101	Human Services Survey	3
HMS	102	Values of Human Services in a Contemporary Society	3
HMS	103	Theories and Techniques in Human Services	3
HMS	104	Group Dynamics for Human Services	3
HMS	249	Foundational Skills in Para-Professional Practice OR	4
HMS	250	Clinical Practice in Human Services OR	(4)
COE	199	Cooperative Education	(4)
		Technical courses	6
		Electives	9
		Subtotal	**34**
		Total Credits	**64**

Technical Courses: Choose six hours **6**

CRJ	101	Introduction to Criminal Justice	3
CRJ	208	Delinquency and the Juvenile Justice System	3
EDP	203	Teaching Exceptional Learners in Regular Classrooms	3
FAM	252	Introduction to Family Science	3
FAM	253	Human Sexuality: Development, Behavior and Attitudes	3
HMS	210	Drugs, Society, and Human Behavior	3
HMS/SWK	200	Dynamics of Human Behavior	3
HMS/SWK	211/255	Introduction to Addictions	3
HMS/SWK	212/260	Crisis Intervention	3
HMS/SWK	220	Cultural Diversity in Human Services	3
HMS/SWK	235/250	Teaching Persons with Mental Retardation	3
HMS	245	Psychiatric Mental Health Technician	3
HMS	265	Working with Disabilities in Human Services	3
HMS	299	Special Topics in Human Services	1-3
IEC	130	Early Childhood Development	3
IEC	200	Child Guidance	3
MNA	100	Medicaid Nurse Aide OR	3
NAA	100	Nursing Assistant Skills I	(3)
PSY	180	Human Relations	3
PSY	185	Human Potential	3
PSY	230	Psychosocial Aspects of Death and Dying	3
SED	110	Orientation to Interpreting for the Deaf	3
SED	101	American Sign Language I	3
SED	102	American Sign Language II	3
SOC	220	The Community	3
SWK	124	Introduction to Social Services	3
SWK	222	Development of Social Welfare	3
SWK	180	Introduction to Gerontology	3
SWK	269	Juvenile Delinquency	3
SWK	270	Corrections	3
SWK	275	The Family	3
SWK	276	Criminology	3
SWK	280	Methods of Working with the Aged	3
SWK	281	Psychology of Aging	3

Murray State University Courses:

SWK	120	Group Preparation and Selection for Foster and Adoptive Parents	2
SWK	121	Child Sexual Abuse for Foster and Adoptive Parents	2

Eastern Kentucky University Courses:

COR	106	Foundations of Youth Work	3
COR	423*	Reclaiming Our Prodigal Sons and Daughters	3
COR	423*	Life Space Crisis Intervention	3

* Special Topics course at EKU; different section numbers indicate different topic content

Eastern Kentucky University Courses:

SWK	106	Food Benefits	3

Certificates

Direct Support Work - 4400003039

(Offered at BLC, BSC, ELC, GTW, HPC, HZC, JFC, OWC, MDC)

Available Completely Online

HMS	102	Values of Human Services in a Contemporary Society	3
HMS	265	Working with Disabilities in Human Services	3
MNA	100	Medicaid Nurse Aide OR	3
NAA	100	Nursing Assistant Skills I	(3)
SWK	275	The Family OR	3
FAM	252	Introduction of Family Science	(3)

Electives – choose one course from the following list:

HMS/SWK	235/250	Teaching Persons with Mental Retardation	3
SWK	180	Introduction to Gerontology	(3)
PSY	230	Psychosocial Aspects of Death and Dying	(3)
HMS/SWK	200	Dynamics of Human Behavior	(3)
		Total Credits	**15**

Aging Services – 4400003049

(Offered at BSC, ELC, GTW, HPC, HZC, MDC, OWC)

HMS	102	Values of Human Services in a Contemporary Society	3
HMS	265	Working with Disabilities in Human Services	3
MNA	100	Medicaid Nurse Aide OR	3
NAA	100	Nursing Assistant Skills I	(3)
SWK	275	The Family OR	3
FAM	252	Introduction of Family Science	(3)
SWK	180	Introduction to Gerontology	3
SWK	281	Psychology of Aging	3
		Total Credits	**18**

Substance Abuse Recovery Coach – 4400003059

(Offered at BSC, ELC, GTW, HPC, HZC, MDC, OWC)

HMS	101	Human Services Survey	3
HMS	102	Values of Human Services in a Contemporary Society	3
HMS	103	Theories and Techniques in Human Services	3
HMS	104	Group Dynamics	3
HMS	210	Drugs, Society and Human Behavior	3
HMS/SWK	211/255	Introduction to Addictions	3
HMS/SWK	212/260	Crisis Intervention	3
SWK	275	The Family OR	3
FAM	252	Introduction of Family Science	(3)
		Total Credits	**24**

Psychiatric Mental Health Technician –4400003069

(Offered at BSC, ELC, GTW, HZC, MDC)

HMS	101	Human Services Survey	3
HMS	102	Values of Human Services in a Contemporary Society	3
HMS	103	Theories and Techniques in Human Services	3
HMS	104	Group Dynamics	3
HMS	210	Drugs, Society and Human Behavior	3
SWK	275	The Family	3
MNA	100	Medicaid Nurse Aide OR	3
NAA	100	Nursing Assistant Skills I	(3)
HMS	245	Psychiatric Mental Health Technician	3
		Technical Elective from approved list	3
		Total Credits	**27**

Technical Electives:

HMS/SWK	211/255	Introduction to Addictions	3
HMS/SWK	212/260	Crisis Intervention	3
HMS/SWK	200	Dynamics of Human Behavior	3
HMS/SWK	220	Cultural Diversity in Human Services	3
HMS	265	Working with Disabilities in Human Services	3
SWK	180	Introduction to Gerontology	3
SWK	276	Criminology	3
SWK	281	Psychology of Aging	3

Industrial Chemical Technology

This program is designed based on North American Process Technician Alliance (NAPTA) principles for process technicians. Basic knowledge in the areas of environmental health and safety, quality control, chemistry, process equipment, process operations, troubleshooting, and workplace skills helps ensure graduates enter the workforce with the fundamentals in operations of a modern chemical facility.

Associate in Applied Science

Industrial Chemical Technology - 4103017019

General Education

ENG	101	Writing I	3
CHE	140	Introductory General Chemistry	3
CHE	145	Introductory General Chemistry Lab	1
MAT	150	College Algebra	3
		Oral Communications	3
		Social/Behavioral Sciences	3
		Heritage/Humanities	3
		Digital Literacy or demonstrated competency	0-3
AET	110	Introduction to Circuit Analysis	4
APT	142	Instrumentation	4
ICT	186	Introduction to Process Technology	3
ICT	192	Process Technology Equipment	4
ICT	194	Process Technology Systems	4
ICT	196	Process Technology Operations	3
ICT	200	Process Troubleshooting	4
ICT	230	Health, Safety, & Environmental Practices OR	3
ISX	101	Introduction to Industrial Safety	(3)
ICT	280	Capstone in Industrial Chemical Technology	2
ITE	250	Team Dynamics and Problem Solving	3
QMS	101	Introduction to Quality Systems	3
PHY	171	Applied Physics OR	4
PHY	152	Introductory Physics II AND	(3)
PHY	162	Introductory Physics II Lab	(1)
ELT	295	Independent Problems OR	1-2
COE	199	Co-operative Education	(1-4)
		Total	**61-67**

Information Management and Design

The Information Management & Design program prepares students for careers in various industries utilizing cutting-edge technology within video game design, graphic design, web design, and library professions. Students will specialize their degree from a choice of four tracks.

The Graphic Design track provides the concepts and skills needed to create and produce design projects such as brochures, flyers, newsletters, logos, product packaging, photo restorations and manipulations, multimedia presentations, simple illustrations, and web sites using industry-standard techniques and graphic design applications.

The Web Design track provides the concepts and skills needed to create and produce web sites using industry-standard techniques using graphic and web design, and video editing applications. The Web Design track graduates will have the ability to create and maintain professional sites and also be capable of working with other web professionals such as programmers, network administrators and database administrators as well as interfacing with management and clients.

The Library and Information Technology track prepares graduates for paraprofessional library work.

The IMD Video Game Design track prepares students to design, develop, and market digital games and simulations. This track focuses on artistic and multimedia game design and development.

The courses within the Graphic and Web Design options will assist with preparation for Adobe Certifications and the Certified Internet Webmaster (CIW) certification exam. The Library and Information Technology option courses may be used to meet Kentucky public library certification requirements.

The IMD program also offers two certificates within the web and graphic design options. The web and graphic design certificates provide up-to-date training in current industry-standard software and trends for practitioners in the fields as well as introductory education for beginning students. In addition, the IMD program offers a certificate in Digital Video for students interested in film editing and cinematic arts.

Associate in Applied Science

Information Management and Design - 1108017019

(Offered at BLC)

General Education Courses

ENG	101	Writing I*	3
ENG	102	Writing II*	3
		Quantitative Reasoning Course*	3
		Natural Sciences Course*	3
		Heritage/Humanities Course*	3
		Social/Behavioral Sciences Course*	3
		Subtotal	**18**

Core Content:

IMD	100	Digital Information and Communications Technologies	3
IMD	133	Beginning Web Design	3
IMD	126	Introduction to Desktop Publishing	3
IMD	210	Microsoft Office Applications	3
IMD	270	Professional Practices	3
IMD	275	Information Management & Communications	3
COE	199	Coop Education OR	3
IMD	271	Internship	(3)
		Subtotal	**21**
		Subtotal (General Education & Core Content)	**39**

*Satisfies General Education requirement for the AAS degree

Graphic Design Track - 110801702

(Offered at BLC)

IMD	115	Introduction to Graphic Design	3
IMD	127	Vector Design with Adobe Illustrator	3
IMD	128	Raster Design with Adobe Photoshop	3
IMD	180	Intermediate Web Design	3
IMD	226	Advanced Desktop Publishing	3
IMD	280	Portfolio Practicum: Graphic Design	3
IMD	277	Typography	3
IMD	228	Advanced Photoshop OR	3
IMD	229	Advanced Illustrator	(3)
		Graphic Design Track Courses	3

Choose from Graphic Design Track Courses:

IMD	230	Advanced Web Design	3
IMD	240	Multimedia Development for the Web	3
IMD	250	Digital Video Editing I	3
IMD	290	Photography	3
IMD	228	Advanced Photoshop (if not taken as core requirement) OR	3
IMD	229	Advanced Illustrator (if not taken as core requirement)	(3)
IMD	294	Seminar in Information Management & Design Technologies	3
IMD	299	Selected Topics in Information Management & Design	3
MGT	282	Principles of Marketing	3

ENG	203	Business Writing	3
		Other Information Management & Design, Video Game Design, Computer & Information Technologies, Architectural, Business, Communication, Fine Arts or other track appropriate courses approved by Program Coordinator	1-3
		Subtotal	**27**
		Total	**66**

Library Information Technology Track - 110801704

(Offered at BLC)

Available Completely Online

LIT	115	Introduction to Reference Services	3
LIT	124	Library Administration	3
LIT	132	Library Technical Services	3
LIT	243	Library Services for Children OR	3
LIT	245	Library Services for Young Adults OR	(3)
LIT	247	Library Services for Adults	(3)
		Library & Information Technology Track Courses	12

Choose a Total of 12 hours from the following:

LIT	120	Readers' Advisory Services	3
LIT	243	Library Services for Children **	3
LIT	245	Library Services for Young Adults **	3
LIT	247	Library Services for Adults **	3
LIT	285	History of Libraries	3
LIN	175	Information Literacy	
LIT	299	Selected Topics in Library Information Management (may be repeated for up to 6 hours)	1-3

** Course can be used as LIT track course if not utilized as LIT track core course

		Subtotal	**24**
		Total	**63**

Web Design Track– 110801703

(Offered at BLC)

IMD	128	Raster Design with Photoshop	3
IMD	180	Intermediate Web Design	3
IMD	230	Advanced Web Design	3
IMD	240	Multimedia Development for the Web	3
IMD	250	Digital Video Editing I	3
IMD	292	Portfolio Practicum: Web Design	3
		Web Design Track Courses	6

Choose from Web Design Track Courses:

IMD	115	Introduction to Graphic Design	3
IMD	127	Vector Design with Adobe Illustrator	3
IMD	290	Photography	3
IMD	294	Seminar in Information Management & Design Technologies	3
IMD	255	Digital Video Editing II	3
IMD	258	Visual Effects for Video	3
CIT	150	Internet Technologies	3
CIT	120	Computational Thinking	3
CIT	140	JavaScript I	3
		Computer Programming Course Approved by Program Coordinator	1-3
		Other Information Management & Design, Computer & Information Technologies, Architectural, Business, Communication, Fine Arts or other Track Appropriate Courses Approved by Program Coordinator	1-3
		Other Web or Graphic Design Courses Approved by Program Coordinator	1-3
		Subtotal	**24**
		Total	**63**

Video Game Design Track– 110801705

(Offered at BLC)

IMD/CIT	124	Introduction to Game Development	3
IMD/CIT	272	Game Design Theory	3
IMD/CIT	274	Seminar in Game Development	3
IMD/CIT	221	Computer Graphics	3
IMD/CIT	222	3D Modeling for Video Games	3
IMD/CIT	223	3D Animation for Video Games	3
IMD/CIT	273	Game Production	3
		Video Game Design Track Course	3

Choose from Video Game Design Track Courses:

IMD	180	Intermediate Web Design with Photoshop	3
IMD	240	Multimedia Development for the Web	3
IMD	250	Digital Video Editing I	3
IMD	290	Photography	3
IMD	128	Raster Design with Photoshop	3
IMD	127	Vector Design with Illustrator	3
IMD	228	Advanced Raster Design with Photoshop	3
IMD	294	Seminar in Information Management and Design	3
IMD	299	Selected Topics in Information Management and Design	3
MGT	282	Principles of Marketing	3
ENG	203	Business Writing	3
		Other Video Game Design Courses approved by Program Coordinator	3
		Other Information Management & Design, Computer & Information Technologies, Architectural, Business, Communication, Fine Arts or other Track Appropriate Courses Approved by Program Coordinator	3
		Subtotal	**24**
		Total	**63**

Certificate

Library Information Technology - 1108013019

(Offered at BLC)

The certificate in Library Information Technology prepares students for paraprofessional jobs in libraries. Upon completion of the academic certificate, students will be able to: perform basic library reference services using print and online sources, plan and produce library services and programs, demonstrate information literacy skills, describe the role of libraries as agencies for information services. Courses taken for the Certificate in Library Information Technology may be used for the Associate of Applied Science degree in Information Management and Design, Library Information Technology track and as electives for the AA/AS degrees. All Library Information Technology courses are web-based distance courses.

Required:

LIT	115	Introduction to Reference Services	3
LIN	175	Information Literacy	3

Students will select one course from each of the following groups::

1. Library Procedures

LIT	124	Library Administration OR	3
LIT	132	Library Technical Services	(3)

2. Library Services

LIT	120	Readers' Advisory Services OR	3
LIT	243	Library Services for Children OR	3
LIT	245	Library Services for Young Adults OR	(3)
LIT	247	Library Services for Adults OR	(3)
LIT	248	Library Services for Preschool Children OR	(3)
LIT	280	Genealogy Services in Libraries OR	(3)

3. Library Information Technology Elective

		LIT elective: any LIT course above LIT 115	3
		Total	**15**

Graphic Design – 1108013029

(Offered at BLC)

IMD	115	Introduction to Graphic Design	3
IMD	133	Beginning Web Design	3
IMD	126	Introduction to Desktop Publishing	3
IMD	127	Vector Design with Adobe Illustrator	3
IMD	128	Raster Design with Adobe Photoshop	3
IMD	226	Advanced Desktop Publishing	3
		Total	**18**

Web Design – 1108013039

(Offered at BLC)

IMD	128	Raster Design with Photoshop	3
IMD	133	Beginning Web Design	3
IMD	180	Intermediate Web Design	3
IMD	230	Advanced Web Design	3
IMD	240	Multimedia Development for the Web	3
IMD	250	Digital Video Editing I	3
		Total	**18**

Digital Video – 1108013049

(Offered at BLC)

IMD	128	Raster Design with Adobe Photoshop	3
IMD	250	Digital Video Editing I	3
IMD	255	Digital Video Editing II	3
IMD	258	Visual Effects for Video	3
		Total	**12**

Instructional Design and Learning Technology

The Instructional Design and Learning Technology program is designed to provide individuals with the knowledge and skills required to be successful in an entry level instructional design position in any field. The core curriculum includes a general education component essential to a collegiate education and a technical component that provides an introduction to productivity software, instruction/curriculum/training design, facilitation skills, multimedia design and development, and human performance consulting. Program participants can select career tracks for their degree that align with their career goals and interests. Instructional Design, eLearning Developer, and Graphic Design for Instruction are available tracks for the program. Students may also choose to customize their track.

The Instructional Design track focuses on instructional systems design through the use of the ADDIE model. This track emphasizes curriculum design and development, using Bloom's Taxonom of Learning Domains, to develop and evaluate models to support competency-based training.

The eLearning Developer track focuses on the use of eLearning development and rapid authoring tools in creating engaging web-based learning/training activities. This track emphasizes SCORM compliance for eLearning, the use of programming languages for web-development, and audio/video production in the development of eLearning courses and learning activities.

The Graphic Design for Instruction track focuses on the graphic design of communications and instructional content. This track emphasizes the design of education and training materials through the use of client software applications and other graphic and animation tools for documents, presentations, and mobile devices. Students in this track will also be required to complete a project to apply their accumulated knowledge of design software and fundamental principles through real-life scenarios.

The Custom Track provices flexibility for the dynamic nature of knowledge-based jobs and student career goals. Students may choose courses to complete their track requirements from technical courses within the Instructional Design and Learning Technology program or may choose a blend of courses from the Education, Visual Communication or Computer & Information Technologies program.

Documentation of digital literacy as defined by KCTCS is required prior to enrolling in the first Instructional Design and Learning Technology course.

Associate in Applied Science

Instructional Design and Learning Technology - 1305017019

ENG	101	Writing I*	3
ENG	102	Writing II*	3
MAT	105	Business Math OR	3
MAT	116	Technical Mathematics OR	(3)
MAT	150	College Algebra	(3)
COM	252	Introduction to Interpersonal Communications	3
		Natural Sciences	3
		Social/Behavioral Sciences	3
		Heritage/Humanities	3
		Total General Education Requirements	**2**

Technical Core Requirements:

IDL	101	Introduction to Instructional Design and Learning Tech	3
CIT	130	Productivity Software	3
IDL	110	Instructional Design I	3
IDL	120	Facilitation Skills OR	3
IDL	123	Multimedia Design and Development	(3)
IDL	210	Instructional Design II	3
IDL	220	Business Management for Instructional Design and Learning Technology	3
IDL	240	Human Performance Consulting	3
IDL	290	Experiential Learning in Instructional Design	3
IDL	299	Instructional Design Capstone	3
		Subtotal	**27**
		Total Core Courses plus General Education	**48**

Instructional Design Track - 130501701

IDL	130	Technical Writing for Instructional Design	3
IDL	230	Evaluation of Instruction	3
IDL	250	Instructional Design III	3
IDL	260	Competency Models and Curriculum Design	3
		Total Credit hours for Instructional Design Track	**60**

ELearning Developer Track - 130501702

IDL	147	eLearning Development I: Rapid Authoring Tools	3
IDL	207	eLearning Development II: HTML, CSS and Java Script	3
IDL	217	Multimedia Development	3
IDL	227	eLearning Development III: Advanced Authoring Tools	3
		Total Credit hours for eLearning Developer Track	**60**

Graphic Design for Instruction Track - 130501703

IDL	113	Introduction of Visual Communications for Learning	3
IDL	203	Designing in Client Applications	3
IDL	213	Designing in Graphic Applications	3
IDL	223	Design Application	3
		Total Credit hours for Graphic Design for Instruction Track	**60**

Custom Track – 130501704

Must select 4 courses from above tracks, or select courses from Education, Visual Communication or Computer & Information Technologies programs.

Total Credit hours for Custom Track **60**

Certificates

Foundations of Instructional Design - 1305013029

ENG	101	Writing I	3
ENG	102	Writing II	3
COM	252	Introduction to Interpersonal Communications	3
IDL	101	Introduction to Instructional Design and Learning Tech	3
CIT	130	Productivity Software	3
IDL	110	Instructional Design I	3
IDL	123	Multimedia Design and Development	3
ID	210	Instructional Design II	3
		Total Credits	**24**

Advanced Instructional Design - 1305013049

IDL	130	Technical Writing for Instructional Design	3
IDL	220	Business and Management for Instructional Design & Learning	3
IDL	230	Evaluation of Instruction	3
IDL	240	Human Performance Consulting	3
IDL	250	Instructional Design III	3
IDL	260	Competency Models and Curriculum Design	3
		Total Credits	**18**

Instructional Facilitation - 1305013039

ENG	101	Writing I	3
COM	252	Introduction to Interpersonal Communications	3
CIT	130	Productivity Software	3
IDL	101	Introduction to Instructional Design and Learning Tech	3
IDL	110	Instructional Design I	3
IDL	120	Facilitation Skills	3
		Total Credits	**18**

eLearning Developer - 1305013019

ENG	101	Writing I	3
COM	252	Introduction to Interpersonal Communications	3
IDL	147	eLearning Development I: Rapid Authoring Tools	3
IDL	207	eLearning Development II: HTML, CSS, and Java Script	3
IDL	217	Multimedia Development	3
IDL	227	eLearning Development III: Advanced Authoring Tools	3
		Total Credits	**18**

Graphic Design of Instruction - 1305013059

ENG	101	Writing I	3
COM	252	Introduction to Interpersonal Communications	3
IDL	113	Introduction of Visual Communications for Learning	3
IDL	123	Multimedia Design and Development	3
IDL	203	Designing in Client Applications	3
IDL	213	Designing in Graphic Applications	3
IDL	223	Design Application	3
		Total Credits	**21**

Insurance Risk Management

The Certificate program in Insurance and Risk Management is a four-course (12 credit hour) credential. Students will learn the foundations of insurance production and multiple lines insurance production. Students will also master the fundamentals of operating an agency and managing sales. Completers of this certificate program will be eligible to sit for the national Accredited Advisor in Insurance (AAI) Certification exam.

Certificate

Insurance and Risk Management – 5217013019

(Offered at JFC)

INS	100	Introduction to Insurance and Risk Management	3
INS	181	Foundations of Insurance Production	3
INS	182	Multiple Lines Insurance Production	3
INS	183	Agency Operations and Sales Management	3
		Total Credits	**12**

Integrated Engineering Technology

The Integrated Engineering Technology Program offers students the opportunity to build a career maintaining integrated manufacturing systems found in advanced manufacturing, with an emphasis on automotive manufacturing. The program leads students through a mechatronics approach to maintaining and troubleshooting highly-automated, complex manufacturing systems that include programmable logic controllers, robots, various types of drives, sensors, photoeyes, and electrohydraulics and electropneumatics. Graduates will be able to work as maintenance technicians in most manufacturing settings, particularly manufacturing settings related to the automotive industry.

Associate in Applied Science

Integrated Engineering Technology – 1442017019

(Offered at BLC)

ENG	101	Writing I	3
MAT	126	Technical Algebra and Trigonometry OR	3
		Higher Level Quantitative Reasoning Course	(3)
		Social/Behavioral Sciences	3
		Heritage/Humanities	3
		Natural Sciences	3
		Oral Communications	3
		Subtotal	**18**

Technical Courses:

		Computer/Digital literacy	3
IET	102	Preventive Maintenance	2
IET	104	Blueprint Reading/Schematics	2
IET	107	Basic Electricity/Electronics	3
IET	108	Mechanical Drive Systems	5
IET	109	Safety	3
IET	110	Welding and Fabrication	4
IET	120	Machine Tool Operations	4
IET	201	Electrohydraulics/Pneumatics	6
IET	203	Programmable Logic Controllers	5
IET	205	Robot Maintenance	4
IET	206	Controls and Instrumentation	5
		Subtotal	**46**
		Total Credits	**64**

Diploma

Integrated Engineering Technology – 1442014019

(Offered at BLC)

Area 1 =

		Written/Oral Communications, or Heritage/Humanities	3

Area 2 =

MAT	126	Technical Algebra and Trigonometry OR	3
		Higher Level Quantitative Reasoning Course	(3)
		Subtotal	**6**

Technical Courses:

		Computer/Digital literacy	3
IET	102	Preventive Maintenance	2
IET	104	Blueprint Reading/Schematics	2
IET	107	Basic Electricity/Electronics	3
IET	108	Mechanical Drive Systems	5
IET	109	Safety	3
IET	110	Welding and Fabrication	4
IET	120	Machine Tool Operations	4
IET	201	Electrohydraulics/Pneumatics	6
IET	203	Programmable Logic Controllers	5
IET	205	Robot Maintenance	4
IET	206	Controls and Instrumentation	5
COE	199	Cooperative Education OR	1
COED	198	Practicum	(1)
		Subtotal	**47**
		Total Credits	**53**

Certificate

Electrical Engineering Technology – 1442013029

(Offered at BLC)

IET	107	Basic Electricity/Electronics	3
IET	203	Programmable Logic Controllers	5
IET	205	Robot Maintenance	4
IET	206	Controls and Instrumentation	5
		Total Credits	**17**

Mechanical Engineering Technology – 1442013019

(Offered at BLC)

IET	102	Preventive Maintenance	2
IET	108	Mechanical Drive Systems	5
IET	201	Electrohydraulics/Pneumatics	6
IET	110	Welding and Fabrication	4
IET	120	Machine Tool Operations	4
		Total Credits	**21**

Interdisciplinary Early Childhood Education

The Interdisciplinary Early Childhood Education Program is designed to provide students an understanding of the cognitive, physical, social and emotional development for working with young children. Opportunities to apply this knowledge in practical experiences are incorporated in the curriculum. Curriculum topics include, but are not limited, to developmental ages and stages, health and safety, curriculum planning, assessment and family involvement. Employment opportunities are available in public and private preschools, early care educational settings, early intervention programs, Head Start, hospitals, campus child development centers, rehabilitation clinics and recreation centers.

Students must earn a "C" or higher in each of the IEC courses in order to graduate.

Associate in Applied Science

Interdisciplinary Early Childhood Education - 1907097019

(Offered at ASC, BLC, ELC GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SMC, WKC)

ENG	101	Writing I	3
ENG	102	Writing II	3
COM	181	Basic Public Speaking OR	3
COM	252	Introduction to Interpersonal Communications	(3)
PSY	110	General Psychology	3
		Heritage/Humanities	3-4
		Natural Sciences	3
		Quantitative Reasoning	3
		Subtotal	**21-22**

Technical Core Courses

		Computer/Digital literacy	0-3
IEC	101	Orientation to Early Childhood Education	3
IEC	102	Foundations of Early Childhood Education	3
IEC	120	Health, Safety & Nutrition OR	3
KHP	230	Human Health & Wellness OR	(3)
NFS	101	Human Nutrition and Wellness	(3)
IEC	130	Early Childhood Development	3
IEC	170	Observation & Assessment OR	3
IEC	190	Applied Experiences in Early Childhood Education	(3)
IEC	180	Approaches to Early Childhood Education Curriculum	3
IEC	200	Child Guidance	3
IEC	216	Literacy and Language in IECE	3
IEC	221	Creative Expressions in IECE	3
IEC	246	Sciences and Mathematics for IECE	3
IEC	235	Introduction to Inclusive Education	3
IEC	260	Infant and Toddler Education and Programming	3
IEC	291	IECE Practicum/Cooperative Education	3
		Subtotal	**39-42**

Computer/Digital literacy must be demonstrated by competency exam or by completing a computer/digital literacy course

Choose one course from the following approved technical support elective courses:

IEC	210	Families & Communities in Early Childhood Education	3
IEC	240	Administration of Early Childhood Education	3
IEC	250	School Age Child Care	3
		Subtotal	**3**
		Total Credits	**63-67**

Diploma

Interdisciplinary Early Childhood Education - 1907094019

(Offered at ASC, BLC, ELC, GTW, HEC, HPC, HZC, MDC, MYC, OWC, SMC)

Area 1 =		Written Communication, Oral Communications, or Heritage/Humanities	3
Area 2 =		Social/Behavioral Sciences, or Quantitative Reasoning	3
		Subtotal	**6**
		Computer/Digital Literacy course OR demonstrated competency	0-3
IEC	101	Orientation to Early Childhood Education	3
IEC	102	Foundations of Early Childhood Education	3
IEC	120	Health, Safety, and Nutrition OR	3
KHP	230	Human Health & Wellness OR	(3)
NFS	101	Human Nutrition and Wellness	(3)
IEC	130	Early Childhood Development	3
IEC	200	Child Guidance	3
IEC	180	Approaches to Early Childhood Education Curriculum	3
IEC	170	Observation and Assessment OR	3
IEC	190	Applied Experiences in Early Childhood Education	(3)
IEC	216	Literacy and Language in IECE	3
IEC	221	Creative Expressions in IECE	3
IEC	246	Sciences and Mathematics for IECE	3
IEC	235	Introduction to Inclusive Education	3
IEC	240	Administration of Early Childhood Education OR	3
IEC	250	School Age Child Care OR	(3)
IEC	210	Families & Communities in Early Childhood Education	(3)
IEC	260	Infant and Toddler Education and Programming	3
IEC	291	IECE Practicum/Cooperative Education	3
		Subtotal	**42-45**
		Total Credits	**48-51**

Certificate

Interdisciplinary Early Childhood Education Technical Studies - 1907093019

(Offered at ASC, BLC, ELC, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SMC,WKC)

Required:

IEC	101	Orientation to Early Childhood Education	3
IEC	102	Foundations of Early Childhood Education	3
IEC	120	Health, Safety, and Nutrition OR	3
KHP	230	Human Health & Wellness OR	(3)
NFS	101	Human Nutrition and Wellness	(3)
IEC	130	Early Childhood Development	3
IEC	200	Child Guidance	3
IEC	180	Approaches to Early Childhood Education Curriculum	3
IEC	170	Observation and Assessment OR	3
IEC	190	Applied Experiences in Early Childhood Education	(3)
IEC	216	Literacy and Language in IECE	3
IEC	221	Creative Expressions in IECE	3
IEC	246	Sciences and Mathematics for IECE	3
IEC	235	Introduction to Inclusive Education	3
IEC	240	Administration of Early Childhood Education OR	3
IEC	250	School Age Child Care OR	(3)
IEC	210	Families & Communities in Early Childhood Education	(3)
IEC	260	Infant and Toddler Education and Programming	3
IEC	291	IECE Practicum/Cooperative Education	3
		Total Credits	**42**

Child Care Assistant - 1907093039

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC,WKC)

Required:

IEC	101	Orientation to Early Childhood Education	3
IEC	102	Foundations of Early Childhood Education	3
		Any IECE three (3) hour course with the exception of IECE 190, IECE 230, IECE 250, and IECE 291.	3
		Total Credits	**9**

Kentucky Child Care Provider - 1907093049

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC,WKC)

Available Completely Online

Required:

IEC	101	Orientation to Early Childhood Education	3
		Total Credits	**3**

Early Childhood Administrator - 1907093059

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SMC,WKC)

Option One: Course Work

Required:

IEC	101	Orientation to Early Childhood Education	3
IEC	102	Foundations of Early Childhood Education	3
IEC	240	Administration of Early Childhood Education	3
BAS	200	Small Business Management OR	3
IEC	230	Business Administration of ECE Programs	(3)
		Total Credits	**12**

Option Two: With a current CDA Articulated credit for IEC 101 and IEC 102

Required:

IEC	240	Administration of Early Childhood Education	3
BAS	200	Small Business Management OR	3
IEC	230	Business Administration of ECE Programs	(3)

Option Three: With Life Skills Portfolio to replace competencies for IEC 101 and IEC 102

Required:

IEC	240	Administration of Early Childhood Education	3
BAS	200	Small Business Management OR	3
IEC	230	Business Administration of ECE Programs	(3)

Life Skills is defined as a Total of five years (10,000 Hours) of paid, full-time work experience in a licensed child care facility. Two and one-half years (5,000 Hours) must have been within the last five (5) years.

School Age Child Care - 1907093069

(Offered at ASC, BLC, ELC, GTW, HEC, HPC, HZC, JFC, OWC, SMC,WKC)

IEC	101	Orientation to Early Childhood Education	3
IEC	102	Foundations of Early Childhood Education	3
IEC	130	Early Childhood Development	3
IEC	200	Child Guidance	3
IEC	250	School Age Child Care	3
		Total Credits	**15**

Invasive Cardiology

The goal of the Invasive Cardiology Program is to provide a competency-based didactic course with a well-rounded clinical experience. The student will be exposed to and expected to acquire skills, attitudes, and habits that are common to professionals in the medical field. Graduates will be prepared for a professional career as an Invasive Cardiovascular Technologist.

Certificate

Invasive Cardiology – 5109153019

(Offered at JFC)

DMS	105	Introduction to Cardiology	13
IVC	140	Invasive Cardiology I	16
IVC	150	Invasive Cardiology II	3
IVC	160	Invasive Cardiology Clinical Education I	6
IVC	165	Invasive Cardiology Clinical Education II	6
		Total Credits	**44**

Logistics and Operations Management

The Logistics and Operations Management program is designed to teach students about the sourcing, procurement, conversion, and logistics concepts associated with the production and delivery of goods and services.

Associate in Applied Science

Logistics and Operations Management – 5202037019

(Offered at WKC)

General Education Courses

ENG	101	Writing I	3
MAT	110	Applied Mathematics or Higher General Education Quantitative Reasoning course	3
		Natural Sciences	3
		Social/Behavioral Sciences (Must be a different course from the ECO course selected in the Technical or Support Courses)	3
		Heritage/Humanities	3
COM	181	Basic Public Speaking OR	3
COM	252	Introduction to Interpersonal Communication	(3)
		Subtotal	**18**

Technical or Support Courses

ACC	201	Financial Accounting	3
ACC	202	Managerial Accounting	3
BAS	160	Introduction to Business	3
BAS	256	International Business	3
BAS	282	Principles of Marketing	3
BAS	283	Principles of Management OR	3
BAS	287	Supervisory Management	(3)
BAS	289	Operations Management	3
TEC	200	Technical Communications OR	3
ENG	102	Writing II	(3)
LOM	100	Introduction to Logistics Management	3
LOM	101	Transportation	3
LOM	102	Supply Chain Management	3
LOM	180	Project Management OR	3
LOM	210	Lean for Logistics	(3)
LOM	202	Applied Supply Chain Management	3
ECO	101	Contemporary Economic Issues OR	3
ECO	150	Global Economic Issues OR	(3)
ECO	201	Principles of Microeconomics OR	(3)
ECO	202	Principles of Macroeconomics	(3)
		Digital Literacy *	0-3
		Electives**	1-3
		Subtotal	**43-48**
		Total Credits	**61-66**

*Digital literacy must be demonstrated either by competency exam or by completing an approved digital literacy course.

** May include BAS, QMS, STA or Business and Industry approved courses.

Certificates

Logistics Management – 5202033019

(Offered at MYC,WKC)

		Digital Literacy*	0-3
LOM	100	Introduction to Logistics Management	3
LOM	101	Transportation	3
LOM	102	Supply Chain Management	3
BAS	287	Supervisory Management	3
TEC	200	Technical Communications OR	3
ENG	101	Writing I	(3)
		Total Credits	**15-18**

Supply Chain Management – 5202033029

(Offered at MYC,WKC)

BAS	160	Introduction to Business	3
BAS	289	Operations Management	3
LOM	100	Introduction to Logistics Management	3
LOM	101	Transportation	3
LOM	102	Supply Chain Management	3
LOM	202	Applied Supply Chain Management	3
		Total Credits	**18**

Logistics Technology– 5202033039

(Offered at MYC,WKC)

		Digital Literacy*	0-3
LOM	100	Introduction to Logistics Management	3
LOM	101	Transportation	3
LOM	102	Supply Chain Management	3
LOM	180	Project Management OR	3
LOM	210	Lean for Logistics	(3)
		Total Credits	**12-15**

International Logistics – 5202033049

(Offered at MYC,WKC)

BAS	160	Introduction to Business	3
BAS	256	International Business	3
LOM	100	Introduction to Logistics Management	3
LOM	101	Transportation	3
LOM	102	Supply Chain Management	3
		Total Credits	**15**

*Digital literacy must be demonstrated either by competency exam or by completing an approved digital literacy course.

Manufacturing Engineering Technology

The Manufacturing Engineering Technology degree offers students the opportunity to build a career in advanced manufacturing. It is focused on producing graduates to work as engineering technicians and first-line supervisors in manufacturing firms. The degree provides a broad foundation across many facets of operations management and manufacturing technologies. Graduates will be able to assist in leading projects across multiple disciplines in advanced manufacturing firms. They will possess an understanding of manufacturing operations and possess the interpersonal skills to lead work groups. They will be able to work in almost any manufacturing setting from discrete manufacturing to continuous flow and assembly line operations.

Associate in Applied Science

Manufacturing Engineering Technology - 1506137029

(Offered at GTW)

General Education

COM	181	Basic Public Speaking OR	3
COM	252	Introduction to Interpersonal Communications	(3)
ENG	101	Writing I	3
MAT	150	College Algebra	3
MAT	155	Trigonometry	3
STA	220	Statistical Method OR	3
MAT	170	Brief Calculus with Applications	(3)
PSY	110	General Psychology OR	3
SOC	101	Introduction to Sociology	(3)
		Natural Sciences	3
		Heritage /Humanities	3
		Subtotal	**24**

Core

		Computer/Digital Literacy	0-3
BAS	160	Introduction to Business	3
COE	199	Cooperative Education OR	1
MFG	175	Lean Operations	(2)
ELT	110	Circuits I	5
ELT	201	Statics and Strengths of Materials	4
BAS	289	Operations Management OR	3
MFG	256	Production Management	(3)
MFG	135	Fundamentals of Mechatronics	6
QMS	101	Introduction to Quality Systems	3
		Subtotal	**25-29**

Technical Electives

BAS	287	Supervisory Management	3
BAS	288	Personal and Organizational Leadership	3
BRX	112	Blueprint Reading for Machinists OR	4
BRX	120	Basic Blueprint Reading	(3)
COE	199	Cooperative Education	1-5
CAD	102	Drafting Fundamentals OR	4
CAD	112	Engineering Graphics	(4)
DFT	152	Intermediate Computer Aided Drafting	4
EET	154	Electrical Construction I	2
EET	155	Electrical Construction I Lab	2
EET	264	Rotating Machinery	2
EET	265	Rotating Machinery Lab	2
EET	270	Electrical Motor Controls I	2
EET	271	Electrical Motor Controls I Lab	2
EET	272	Electrical Motor Controls II	2
EET	273	Electrical Motor Controls II Lab	2
EET	276	Programmable Logic Controllers	2
EET	277	Programmable Logic Controllers Lab	2
ELT	110	Circuits I	5
ELT	114	Circuits II	5
ELT	260	Robotics and Industrial Automation	5
ETT	110	Voice & Data Installer Level I	4
FPX	100	Fluid Power	3
FPX	101	Fluid Power Lab	2
IMT	150	Maintaining Industrial Equipment I	3
IMT	151	Maintaining Industrial Equipment I Lab	2
MFG	145	Manufacturing Processes OR	3
CMM	110	Fundamentals of Machine Tool - A	(3)
CMM	112	Fundamentals of Machine Tool – B	4
CMM	118	Metrology and Control Charts	3
CMM	130	Manual Programming	3
CMM	132	CAD/CAM/CNC	3
MFG	256	Production Management	3
QMS	101	Introduction to Quality Systems	3
QMS	220	Quality Audits	3
QMS	240	Statistics for Quality I (if ST291 is not taken in the core)	3
		Subtotal	**14**
		Total Credits	**63-67**

A minimum of fourteen (14) credit hours must be taken from the approved technical elective list. Other courses may be taken with the approval of the program coordinator.

Certificates

Integrated Manufacturing Technologies - 1506133069

(Offered at GTW)

FPX	100	Fluid Power	3
FPX	101	Fluid Power Lab	2
ELT	110	Circuits I	5
IMT	150	Maintaining Industrial Equipment	3
IMT	151	Maintaining Industrial Equipment Lab	2
EET	270	Electrical Motor Controls I	2
EET	271	Electrical Motor Controls I Lab	2
		Total Credits	**19**

Quality Control - 1506133049

(Offered at GTW)

General Education

COM	181	Basic Public Speaking OR	3
COM	252	Introduction to Interpersonal Communications	(3)
MAT	150	College Algebra	3
		Subtotal	**6**

Core

BRX	112	Blueprint Reading for Machinists OR	4
BRX	120	Basic Blueprint Reading OR	(3)
CAD	102	Drafting Fundamentals OR	(4)
CAD	112	Engineering Graphics	(4)
CMM	118	Metrology and Control Charts	3
QMS	101	Introduction to Quality Systems	3
QMS	220	Quality Audits	3
STA	220	Statistics OR	3
QMS	240	Statistics for Quality I	(3)
		Subtotal	**15-16**
		Total	**21-22**

Operations Management - 5202013369

(Offered at BSC, GTW)

General Education

COM	181	Basic Public Speaking OR	3
COM	252	Introduction to Interpersonal Communications	(3)
		Subtotal	**3**

Core

BAS	160	Introduction to Business	3
BAS	287	Supervisory Management OR	3
BAS	288	Personal and Organizational Leadership OR	(3)
QMS	101	Introduction to Quality Systems	(3)
BAS	289	Operations Management OR	3
MFG	256	Production Management	(3)
		Subtotal	**9**
		Total	**12**

Fundamentals of Mechatronics - 1500003219

(Offered at BSC)

MFG	135	Fundamentals of Mechatronics OR	6
MFG	125	Special Topics in Engineering Technology: Fundamentals of Mechatronics – A AND	(3)
MFG	130	Special Topics in Engineering Technology: Fundamentals of Mechatronics – B	(3)
		Total	**6**

Enhanced Operator – 1506133119

(Offered at)

WPP	2001	Soft Skills	1
ISX	1001	Safety & Universal Precaution	1
MAT	110	Applied Mathematics	3
QMS	101	Introduction to Quality Systems	3
CMM	118	Metrology & Control Charts	2
MFG	175	Lean Operations	2
IET	1206	Hand & Power Tools	
QMS	299	Selected Topics in Quality Management Systems: Yellow Belt Certification	1
		Total	**14**

Manufacturing Industrial Technology

Two programs are offered under the broader heading of MIT. They are Electrical Technology and Industrial Maintenance Technology

MIT: Electrical Technology

The Electrical Technology Program focuses on preparing students for various entry-level electrical positions in industry and the building trades. The study of electrical theory in the classroom and the practical application of that theory in labs provide the foundation of this program. This program is versatile in offering three different tracks within the Associate of Applied Science degree. A variety of certificates and diplomas serve as pathways to the AAS degree tracks or as meeting specific training needs.

Students enrolled in the Electrical Technology program are required to achieve a minimum grade of "C" in the technical core and in those courses selected as technical electives.

Associate in Applied Science

Electrical Technology - 4603027039

(Offered at BSC, BLC, ELC, GTW, HPC, OWC, SKY,WKC)

General Education:

ENG	101	Writing I	3
MAT	116	Technical Mathematics OR	3
MAT	126	Technical Algebra & Trigonometry OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
		Natural Sciences	3
		Social/Behavioral Sciences	3
		Heritage/Humanities	3
		Oral Communications	3
		Subtotal	**18**

Technical Core:

ELT	110	Circuits I OR	5
EET	119	Basic Electricity	(5)
		Approved Course from the Technical Core List	4-5
EET	250	National Electric Code	4
EET	264	Rotating Machinery	2
EET	265	Rotating Machinery Lab	2
EET	270	Electrical Motor Controls I	2
EET	271	Electrical Motor Controls I Lab	2
EET	127	Electrical Capstone	1
		Digital Literacy OR	3
		If any student successfully tests out of Computer/Digital Literacy he/she must take an additional Technical Course approved by the Electrical Program Coordinator.	(3)
		Subtotal	**25-26**

Technical Core List: Pick a course(s) for a minimum of 4 credits and a maximum of 5 credits from this list.

ELT	114	Circuits II	5
EET	150	Transformers AND	2
EET	151	Transformers Lab	1
ELT	260	Robotics and Industrial Automation	5
EET	154	Electrical Construction I AND	2
EET	155	Electrical Construction I Lab	2
EET	276	Programmable Logic Controllers AND	2
EET	277	Programmable Logic Controllers Lab	2

Note: This list is not all-inclusive. Other courses may be substituted at the discretion of the program instructor/advisor.

Industrial Electrician Track - 460302701

(Offered at BSC, BLC, ELC, GTW, HPC, OWC,WKC)

EET	154	Electrical Construction I AND	2
EET	155	Electrical Construction I Lab AND	2
EET	252	Electrical Construction II AND	2
EET	253	Electrical Construction II Lab OR	2
EET	254	Electrical Construction AND	(3)
EET	255	Electrical Construction Lab	(4)
EET	272	Electrical Motor Controls II AND	2
EET	273	Electrical Motor Controls II Lab AND	2
EET	276	Programmable Logic Controllers AND	2
EET	277	Programmable Logic Controllers Lab OR	2
EET	278	Electrical Motor Controls II and PLCs AND	(3)
EET	279	Electrical Motor Controls II and PLCs Lab	(4)
		Technical Electives*	8
		Subtotal	**22-24**
		Total Credits	**65-68**

In the situation that any course that has been used in the Technical Core is also repeated in the Track, the student must select a course with the same number of hours from the technical elective list or a course approved by the program coordinator.

Construction Electrician Track - 460302702

(Offered at BSC, BLC, ELC, GTW, HPC, OWC,WKC)

EET	154	Electrical Construction I AND	2
EET	155	Electrical Construction I Lab AND	2
EET	252	Electrical Construction II AND	2
EET	253	Electrical Construction II Lab OR	2
EET	254	Electrical Construction AND	(3)
EET	255	Electrical Construction Lab	(4)
		Technical Electives*	10
		Subtotal	**17-18**
		Total Credits	**60-61**

In the situation that any course that has been used in the Technical Core is also repeated in the Track, the student must select a course with the same number of hours from the technical elective list or a course approved by the program coordinator.

Motor Controls Electrician Track - 460302703

(Offered at BSC, BLC, HPC, OWC,WKC)

EET	272	Electrical Motor Controls II AND	2
EET	273	Electrical Motor Controls II Lab AND	2
EET	276	Programmable Logic Controllers AND	2
EET	277	Programmable Logic Controllers Lab OR	2
EET	278	Electrical Motor Controls II and PLC's AND	(3)
EET	279	Electrical Motor Controls II and PLC's Lab	(4)
FPX	100	Fluid Power AND	3
FPX	101	Fluid Power Lab OR	2
ELT	265	Applied Fluid Power	(3)
		Technical Electives*	7
		Subtotal	**17-20**
		Total Credits	**60-63**

In the situation that any course that has been used in the Technical Core is also repeated in the Track, the student must select a course with the same number of hours from the technical elective list or a course approved by the program coordinator.

Diploma

Electrical Technology - 4603024049

(Offered at ASC, BLC, BSC, ELC, GTW, HPC, HZC, MYC, OWC, SEC, SKY, SMC, WKC)

General Education:

Area 1

	Written Communication OR	3
	Heritage/ Humanities OR	(3)
	Oral Communications	(3)

Area 2

MAT	116	Technical Mathematics OR	3
MAT	126	Technical Algebra & Trigonometry OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
		Subtotal	**6**

Technical Core:

ELT	110	Circuits I OR	5
EET	119	Basic Electricity	(5)
		Approved Course from Technical Core List	4-5
EET	250	National Electric Code	4
EET	264	Rotating Machinery	2
EET	265	Rotating Machinery Lab	2
EET	270	Electrical Motor Controls I	2
EET	271	Electrical Motor Controls I Lab	2
EET	127	Electrical Capstone	1
		Digital Literacy OR	3
		If any student successfully tests out of Digital Literacy he/she must take an additional Technical Course approved by the Electrical Program Coordinator	(3)
		Subtotal	**25-26**

Technical Core List: Pick a course(s) for a minimum of 4 credits and a maximum of 5 credits from this list.

EET	114	Circuits II	5
EET	150	Transformers AND	2
EET	151	Transformers Lab	1
ELT	260	Robotics and Industrial Automation	5
EET	154	Electrical Construction I AND	2
EET	155	Electrical Construction I Lab	2
EET	276	Programmable Logic Controllers AND	2
EET	277	Programmable Logic Controllers Lab	2

Note: This list is not all-inclusive. Other courses may be substituted at the discretion of the program instructor/advisor.

Industrial Electrician Track - 460302401

(Offered at ASC, BLC, BSC, ELC, GTW, HPC, HZC, MYC, OWC, SEC, SKY, SMC, WKC)

EET	154	Electrical Construction I AND	2
EET	155	Electrical Construction I Lab AND	2
EET	252	Electrical Construction II AND	2
EET	253	Electrical Construction II Lab OR	2
EET	254	Electrical Construction AND	(3)
EET	255	Electrical Construction Lab	(4)
EET	272	Electrical Motor Controls II AND	2
EET	273	Electrical Motor Controls II Lab AND	2
EET	276	Programmable Logic Controllers AND	2
EET	277	Programmable Logic Controllers Lab OR	2
EET	278	Electrical Motor Controls II and PLCs AND	(3)
EET	279	Electrical Motor Controls II and PLCs Lab	(4)
		Technical Electives*	9
		Subtotal	**23-25**
		Total Credits	**54-57**

In the situation that any course that has been used in the Technical Core is also repeated in the Track, the student must select a course with the same number of hours from the technical elective list or a course approved by the program coordinator.

Construction Electrician Track - 460302402

(Offered at BLC, BSC, ELC, GTW, HPC, HZC, MYC, OWC, SEC, SKY, SMC,WKC)

EET	154	Electrical Construction I AND	2
EET	155	Electrical Construction I Lab AND	2
EET	252	Electrical Construction II AND	2
EET	253	Electrical Construction II Lab OR	2
EET	254	Electrical Construction AND	(3)
EET	255	Electrical Construction Lab	(4)
		Technical Electives*	10
		Subtotal	**17-18**
		Total Credits	**48-50**

In the situation that any course that has been used in the Technical Core is also repeated in the Track, the student must select a course with the same number of hours from the technical elective list or a course approved by the program coordinator.

Motor Controls Electrician Track - 460302403

(Offered at BLC, BSC, HPC, OWC,WKC)

EET	272	Electrical Motor Controls II AND	2
EET	273	Electrical Motor Controls II Lab AND	2
EET	276	Programmable Logic Controllers AND	2
EET	277	Programmable Logic Controllers Lab OR	2
EET	278	Electrical Motor Controls II and PLC's AND	(3)
EET	279	Electrical Motor Controls II and PLC's Lab	(4)
FPX	100	Fluid Power AND	3
FPX	101	Fluid Power Lab OR	2
ELT	265	Applied Fluid Power	(3)
		Technical Electives*	7
		Subtotal	**17-20**
		Total Credits	**48-52**

In the situation that any course that has been used in the Technical Core is also repeated in the Track, the student must select a course with the same number of hours from the technical elective list or a course approved by the program coordinator.

Certificates

Electrical Construction - 4603023029

(Offered at ASC, BLC, BSC, ELC, HPC, HZC, MYC, OWC, SEC, SKY, SMC,WKC)

ELT	110	Circuits I OR	5
EET	119	Basic Electricity	(5)
EET	150	Transformers	2
EET	151	Transformers Lab	1
EET	250	National Electric Code	4
EET	154	Electrical Construction I AND	2
EET	155	Electrical Construction I Lab AND	2
EET	252	Electrical Construction II AND	2
EET	253	Electrical Construction II Lab OR	2
EET	254	Electrical Construction AND	(3)
EET	255	Electrical Construction Lab	(4)
EET	264	Rotating Machinery AND	2
EET	265	Rotating Machinery Lab AND	2
EET	270	Electrical Motor Controls I AND	2
EET	271	Electrical Motor Controls I Lab OR	2
EET	268	Rotating Machinery Electrical Motor Controls I AND	(3)
EET	269	Rotating Machinery Electrical Motor Controls I Lab	(4)
		Technical Electives	5
		Total Credits	**31-33**

Electrician Trainee Level I - 4603023039

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MYC, OWC, SEC, SKY, SMC,WKC)

ELT	110	Circuits I OR	5
EET	119	Basic Electricity	(5)
		Technical Electives	3
		Total Credits	**8**

Electrician Trainee Level II - 4603023059

(Offered at ASC, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MYC, OWC, SEC, SKY, SMC,WKC)

ELT	110	Circuits I OR	5
EET	119	Basic Electricity	(5)
		Technical Electives	8
		Total Credits	**13**

Residential Electricity Level I - 4603023049

(Offered at ASC, BLC, BSC, ELC, GTW, HPC, HZC, JFC, MYC, OWC, SEC, SKY, SMC,WKC)

ELT	110	Circuits I OR	5
EET	119	Basic Electricity	(5)
EET	154	Electrical Construction I	2
EET	155	Electrical Construction I Lab	2
		Technical Electives	5
		Total Credits	**14**

Residential Electricity Level II - 4603023069

(Offered at ASC, BLC, BSC, ELC, GTW, HPC, HZC, MYC, OWC, SEC, SKY, SMC, WKC)

ELT	110	Circuits I OR	5
EET	119	Basic Electricity	(5)
EET	154	Electrical Construction I AND	2
EET	155	Electrical Construction I Lab AND	2
EET	252	Electrical Construction II AND	2
EET	253	Electrical Construction II Lab OR	2
EET	254	Electrical Construction AND	(3)
EET	255	Electrical Construction Lab	(4)
EET	250	National Electrical Code	4
		Technical Electives	5
		Total Credits	**21-22**

Electrical Motor Control Level I - 4603023079

(Offered at ASC, BLC, BSC, ELC, GTW, HPC, HZC, MYC, OWC, SEC, SKY, SMC, WKC)

ELT	110	Circuits I OR	5
EET	119	Basic Electricity	(5)
EET	150	Transformers AND	2
EET	151	Transformers Lab AND	1
EET	264*	Rotating Machinery AND	2
EET	265*	Rotating Machinery Lab OR	2
EET	266	Rotating Machinery and Transformers AND	(3)
EET	267	Rotating Machinery and Transformers Lab	(3)
EET	250	National Electrical Code	4
EET	270	Electrical Motor Controls I AND	2
EET	271	Electrical Motor Controls I Lab AND	2
EET	264*	Rotating Machinery AND	(2)
EET	265*	Rotating Machinery Lab OR	(2)
EET	268	Rotating Machinery Electrical Motor Controls I AND	(3)
EET	269	Rotating Machinery Electrical Motor Controls I Lab	(4)
		Digital Literacy Course	3
		If any student successfully tests out of Digital Literacy, he/she must take an additional Technical Course approved by the Electrical Program Coordinator.	(3)
		Total Credits	**23-25**

*May be offered in different combinations.

Electrical Motor Control Level II - 4603023089

(Offered at ASC, BLC, BSC, ELC, GTW, HPC, HZC, MYC, OWC, SEC, SKY, SMC, WKC)

ELT	110	Circuits I OR	5
EET	119	Basic Electricity	(5)
EET	150	Transformers AND	2
EET	151	Transformers Lab AND	1
EET	264*	Rotating Machinery AND	2
EET	265*	Rotating Machinery Lab OR	2
EET	266	Rotating Machinery and Transformers AND	(3)
EET	267	Rotating Machinery and Transformers Lab	(3)
EET	250	National Electrical Code	4
EET	264*	Rotating Machinery AND	(2)
EET	265*	Rotating Machinery Lab AND	(2)
EET	270	Electrical Motor Controls I AND	2
EET	271	Electrical Motor Controls I Lab OR	2
EET	268	Rotating Machinery Electrical Motor Controls I AND	(3)
EET	269	Rotating Machinery Electrical Motor Controls I Lab	(4)
EET	272	Electrical Motor Controls II AND	2
EET	273	Electrical Motor Controls II Lab AND	2
EET	276	Programmable Logic Controllers AND	2
EET	277	Programmable Logic Controllers Lab OR	2
EET	278	Electrical Motor Controls II and PLCs AND	(3)
EET	279	Electrical Motor Controls II and PLCs Lab	(4)
		Digital Literacy Course	3
		If any student successfully tests out of Digital Literacy, he/she must take an additional Technical Course approved by the Electrical Program Coordinator.	(3)
		Total Credits	**34**

* May be offered in different combinations.

Voice and Data Wiring Installer Level I - 4603023099

(Offered at ASC, BLC, ELC, GTW, HPC, SMC)

		Digital Literacy Course	3
		If any student successfully tests out of Digital Literacy, he/she must take an additional Technical Course approved by the Electrical Program Coordinator.	(3)
EET	154	Electrical Construction I	2
EET	155	Electrical Construction I Lab	2
ETT	110	Voice and Data Installer Level 1	4
ETT	112	Basic Electrical Theory	3
ETT	113	Basic Electrical Theory Lab	1
		Total Credits	**15**

Voice and Data Wiring Installer Level II - 4603023109

(Offered at BLC, ELC, GTW, HPC, SMC)

EET	252	Electrical Construction II	2
EET	253	Electrical Construction II Lab	2
ETT	114	Voice and Data Installer Level 2	4
ETT	116	Fiber Optics Systems	3
ETT	118	Residential Network Wiring	3
		Total Credits	**14**

Voice and Data Wiring Technician - 4603023119

(Offered at BLC, ELC, GTW, HPC, SMC)

ETT	120	Project Management	3
ETT	122	Voice and Data Installer Technician	3
ETT	123	Voice and Data Installer Technician Lab	2
ETT	199	Cooperative Education for Voice and Data Wiring Technicians	3
		Total Credits	**11**

MIT: Industrial Maintenance Technology

Industrial Maintenance Track:

An understanding of the requirements and opportunities in maintenance, good safety practices, pride in workmanship, and an understanding of the principles and accepted practices of the maintenance trade are covered in this program. Students are trained to hold positions in factories, hospitals, hotels, etc., where multi-skilled maintenance personnel are needed. Included are courses in air conditioning, carpentry, electricity, machine tool, metal fabrication, and welding.

Progression in the Industrial Maintenance Technology program is contingent upon achievement of a grade of "C" or better in each technical course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

Advanced Manufacturing Technician Track

Advanced Manufacturing requires demonstrating multiple skills and competencies. Students accepted into this program gain valuable workplace experience, working three (3) days in a manufacturing environment and two (2) days on campus in a manufacturing-based classroom. Critical conceptual components of the track include embedded Safety Culture, Workplace Organization (5S), Lean Manufacturing, Problem Solving and Maintenance Reliability, coupled with Personal Behavior development (Attendance, Communication, Diligence, Teamwork, Initiative, and Interpersonal Relations) within the program pathway. Successful students apply learned skills throughout the program in the campus classroom, campus laboratory and manufacturing workplace. The advanced manufacturing technician (AMT) track develops multiple skills within the industrial maintenance pathway for manufacturing employers.

Progression in the Industrial Maintenance Technology program is contingent upon achievement of a grade "C" or better in all courses and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

AMTEC Track

This program affords students the opportunity to achieve an understanding of the advanced skills needed to obtain a successful career in a constantly changing and globally competitive workforce. Students are trained in the multi-skilled maintenance trade with an emphasis on those skills needed in automotive industrial facilities.

Progression in the Industrial Maintenance AMTEC track is contingent upon achievement of a grade of "C" or better in each technical course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

Associate in Applied Science

Industrial Maintenance Technology - 4703037019

(Offered at ASC, BSC, BLC, ELC, GTW, HEC, HPC, JFC, MYC, OWC, SKY, SMC, WKC)

General Education Core:

ENG	101	Writing I	3
MAT	116	Technical Mathematics OR Higher	3
		Natural Sciences	3
		Heritage/Humanities	3
		Social/Behavioral Sciences	3
		Oral Communications	3
		Subtotal	**18**

Industrial Maintenance Track- 470303701

(Offered at ASC, BSC, BLC, ELC, GTW, HEC, HPC, JFC, SKY, SMC,WKC)

Technical Core:

		Digital Literacy	3
BRX	110	Basic Blueprint Reading for Machinist OR	(2)
BRX	120	Basic Blueprint Reading OR	3
ELT	102	Blueprint Reading	(2)
FPX	100	Fluid Power AND	3
FPX	101	Fluid Power Lab OR	2
ELT	265	Applied Fluid Power	(3)
IMT	110	Industrial Maintenance Electrical Principles AND	3
IMT	111	Industrial Maintenance Electrical Principles Lab OR	2
ELT	110	Circuits I OR	(5)
EET	119	Basic Electricity	(5)
IMT	150	Maintaining Industrial Equipment I AND	3
IMT	151	Maintaining Industrial Equipment I Lab	2
IMT	220	Industrial Maintenance Electrical Motor Controls I AND	3
IMT	221	Industrial Maintenance Electrical Motor Controls I Lab OR	2
EET	270	Electrical Motor Controls I AND	(2)
EET	271	Electrical Motor Controls I Lab OR	(2)
ELT	244	Electrical Machinery and Controls OR	(4)
IMT	120	Industrial Maintenance Rotating Machinery AND	(3)
IMT	121	Industrial Maintenance Rotating Machinery Lab OR	(2)
EET	264	Rotating Machinery AND	(2)
EET	265	Rotating Machinery Lab	(2)
IMT	100	Welding for Maintenance AND	3
IMT	101	Welding for Maintenance Lab OR	2
WLD	120	Shielded Metal Arc Welding AND	(2)
WLD	121	Shielded Metal Arc Welding Fillet Lab OR	(3)
WLD	140	Gas Metal Arc Welding AND	(2)
WLD	141	Gas Metal Arc Welding Fillet Lab OR	(3)
WLD	152	Basic Welding B	(5)
IMT	289	Industrial Maintenance Technology Capstone	1
		Subtotal	**28-32**

Technical Electives:

Eighteen (18) credit hours of electives must be taken from the approved list. The list is not all inclusive. Other technical elective courses may be taken with approval of the program instructor/advisor.

Subtotal	**18**
Total Credits	**64-68**

**If courses equaling 10 credits are taken, five (5) credits may be used as electives.

Technical Electives List*:

ACR	100	Refrigeration Fundamentals	3
ACR	101	Refrigeration Fundamentals Lab	2
ACR	250	Cooling and Dehumidification	3
ACR	251	Cooling and Dehumidification Lab	2
ACR	260	Heating and Humidification	3
ACR	261	Heating and Humidification Lab	2
BRX	210	Mechanical Blueprint Reading for Machinist	2
CAD	100	Introduction to Computer Aided Design OR	3
		Modules CAD 1001 – 1004	(3)
CAD	150	Introduction to Programming: CAD	4
CMM	110	Fundamentals of Machine Tools – A	3
CMM	112	Fundamentals of Machine Tools – B	4
CMM	114	Fundamentals of Machine Tools	7
CMM	120	Applied Machining I	3
CMM	122	Applied Machining II	3
CMM	124	Applied Machining	6
CMM	224	Advanced Industrial Machining	6
COE	199	Cooperative Education	1-8
EET	148	Electronic Drafting	3
EET	150	Transformers	2
EET	151	Transformers Lab	1
EET	254	Electrical Construction	3
EET	255	Electrical Construction Lab	4
EET	264	Rotating Machinery	2
EET	265	Rotating Machinery Lab	2
EET	276	Programmable Logic Controllers	2
EET	277	Programmable Logic Controllers Lab	2
ELT	106	Mechanical Engineering Graphics	2
ELT	122	Mechanical Power Transmission Systems	3
ELT	124	Mechanical Power Transmission Systems Lab	1
ELT	243	Electric Power Distribution	3
ELT	250	Programmable Logic Controllers	4
IMT	100	Welding for Maintenance	3
IMT	101	Welding for Maintenance Lab	2
IMT	115	Maintenance Machining I	2
IMT	116	Maintenance Machining I Lab	5
IMT	120	Industrial Maintenance Rotating Machinery	3
IMT	121	Industrial Maintenance Rotating Machinery Lab	2
IMT	130	Industrial Maintenance Electrical Concepts	6
IMT	150	Maintaining Industrial Equipment	3
IMT	151	Maintaining Industrial Equipment Lab	2
IMT	198	Practicum	1-8
IMT	199	Cooperative Education	1-8
IMT	200	Industrial Robotics and Robotic Maintenance	4
IMT	220	Industrial Maintenance Electrical Motor Controls I	3
IMT	221	Industrial Maintenance Electrical Motor Controls I Lab	2
IMT	230	Industrial Maintenance of PLCs	5
IMT	231	Industrial Maintenance of PLCs Lab	2
IMT	240	Industrial Maintenance Motor Control Concepts	6
IMT	241	Industrial Maintenance Motor Control Concepts Lab	4
IMT	250	Maintaining Industrial Equipment II	2
IMT	251	Maintaining Industrial Equipment II Lab	3
IMT	280	Advanced Programmable Logic Controllers	3
IMT	281	Advanced Programmable Logic Controllers Lab	2
IMT	289	Industrial Maintenance Technology Capstone	1
IMT	290	Special Problems	1
ISX	100	Industrial Safety	3
ISX	101	Introduction to Industrial Safety	3
MST	200	Advanced Hydraulic Systems	3
MST	201	Advanced Hydraulic Systems Lab	2

MST	204	Advanced Pneumatic Systems	3
MST	205	Advanced Pneumatic Systems Lab	2
PLB	150	Plumbing, Introduction to the Trade	3
PLB	151	Basic Plumbing Skills	3
PHS	175	Applied Physics	6
PHX	150	Introductory Physics	3
PMX	100	Precision Measurement	3
WLD	100	Oxy-Fuel Systems	2
WLD	101	Oxy-Fuel Systems Lab	2
WLD	123	Shielded Metal Arc Welding Groove Welds with Backing Lab	3
WLD	151	Basic Welding A	2

Advanced Manufacturing Technician Track- 470303702

(Offered at BSC, BLC, ELC, GTW, HPC, JFC, SKY, SMC)

Technical Core:

		Digital Literacy	3
BRX	120	Basic Blueprint Reading	3
CMM	110	Fundamentals of Machine Tools – A	3
EET	270	Electrical Motor Controls I AND	2
EET	271	Electrical Motor Controls I Lab	2
EET	272	Electrical Motor Controls II AND	2
EET	273	Electrical Motor Controls Lab II	2
EET	276	Programmable Logic Controllers AND	2
EET	277	Programmable Logic Controllers Lab	2
FPX	100	Fluid Power AND	3
FPX	101	Fluid Power Lab	2
IET	1301	Safety Culture	1
IET	1302	5S	1
IET	1303	Total Production System Maintenance	1
IET	1304	Problem Solving	1
IET	1305	Maintenance Reliability	1
IMT	100	Welding for Maintenance AND	3
IMT	101	Welding for Maintenance Lab	2
IMT	110	Industrial Maintenance Electrical Principles AND	3
IMT	111	Industrial Maintenance Electrical Principles Lab	2
IMT	150	Maintaining Industrial Equipment AND	3
IMT	151	Maintaining Industrial Equipment Lab	2
IMT	198	Practicum	2
IMT	200	Industrial Robotics and Robotic Maintenance	4
IMT	289	Industrial Maintenance Technology Capstone	1
		Subtotal	53
		Total Credits	71

*Note: Only Integrated Engineering Technology (IET) courses are approved for substitution into the Advanced Manufacturing Technician Track.

*Note: Minimum of 1,824 hours of Industry Sponsored Internship.

Automotive Manufacturing Technical Education Collaborative (AMTEC) Track- 470303703

(Offered at BSC, BLC, HPC, JFC, SMC)

Technical Core:

		Digital Literacy	3
BRX	110	Basic Blueprint Reading for Machinist OR	(2)
BRX	120	Basic Blueprint Reading OR	3
ELT	102	Blueprint Reading	(2)
FPX	100	Fluid Power AND	3
FPX	101	Fluid Power Lab OR	2
ELT	265	Applied Fluid Power	(3)
IMT	110	Industrial Maintenance Electrical Principles AND	3
IMT	111	Industrial Maintenance Electrical Principles Lab OR	2
ELT	110	Circuits I OR	(5)
EET	119	Basic Electricity	(5)
IMT	150	Maintaining Industrial Equipment I AND	3
IMT	151	Maintaining Industrial Equipment I Lab	2
IMT	220	Industrial Maintenance Electrical Motor Controls I AND	3
IMT	221	Industrial Maintenance Electrical Motor Controls I Lab OR	2
EET	270	Electrical Motor Controls I AND	(2)
EET	271	Electrical Motor Controls I Lab OR	(2)
ELT	244	Electrical Machinery and Controls OR	(4)
IMT	120	Industrial Maintenance Rotating Machinery AND	(3)
IMT	121	Industrial Maintenance Rotating Machinery Lab OR	(2)
EET	264	Rotating Machinery AND	(2)
EET	265	Rotating Machinery Lab	(2)
IMT	100	Welding for Maintenance AND	3
IMT	101	Welding for Maintenance Lab OR	2
WLD	120	Shielded Metal Arc Welding AND	(2)
WLD	121	Shielded Metal Arc Welding Fillet Lab OR	(3)
WLD	140	Gas Metal Arc Welding AND	(2)
WLD	141	Gas Metal Arc Welding Fillet Lab OR	(3)
WLD	152	Basic Welding B	(5)
IMT	289	Industrial Maintenance Technology Capstone	1
		Subtotal	**28-32**

Technical Electives:

IET	109	Safety	3
IET	120	Machine Tool Operations	4
IET	203	Programmable Logic Controllers	5
IET	205	Robot Maintenance	4
		Subtotal	16
		Total Credits	**62-66**

Diploma

Industrial Maintenance Technician - 4703034049

(Offered at ASC, BLC, BSC, ELC, GTW, HPC, JFC, MYC, OWC, SEC, SKY, SMC, WKC)

General Education:

Area 1 =

		Written Communication, Oral Communications, or Heritage/Humanities	3

Area 2 =

MAT	116	Technical Mathematics OR Higher	3
		Subtotal	**6**

Technical Core:

		Digital Literacy	3
BRX	120	Basic Blueprint Reading OR	3
BRX	110	Basic Blueprint Reading for Machinist OR	(2)
BRX	112	Blueprint Reading for Machinist OR	(4)
ELT	102	Blueprint Reading	(2)
FPX	100	Fluid Power AND	3
FPX	101	Fluid Power Lab OR	2
ELT	265	Applied Fluid Power	(3)
IMT	110	Industrial Maintenance Electrical Principles AND	3
IMT	111	Industrial Maintenance Electrical Principles Lab OR	2
ELT	110	Circuits I OR	(5)
EET	119	Basic Electricity	(5)
IMT	150	Maintaining Industrial Equipment I AND	3
IMT	151	Maintaining Industrial Equipment I Lab	2
IMT	220	Industrial Maintenance Electrical Motor Controls I AND	3
IMT	221	Industrial Maintenance Electrical Motor Controls I Lab OR	2
EET	270	Electrical Motor Controls I AND	(2)
EET	271	Electrical Motor Controls I Lab OR	(2)
ELT	244	Electrical Machinery and Controls OR	(4)
IMT	120	Industrial Maintenance Rotating Machinery AND	(3)
IMT	121	Industrial Maintenance Rotating Machinery Lab OR	(2)
EET	264	Rotating Machinery AND	(2)
EET	265	Rotating Machinery Lab	(2)
IMT	100	Welding for Maintenance AND	3
IMT	101	Welding for Maintenance Lab OR	2
WLD	120	Shielded Metal Arc Welding AND	(2)
WLD	121	Shielded Metal Arc Welding Fillet Lab OR	(3)
WLD	140	Gas Metal Arc Welding AND	(2)
WLD	141	Gas Metal Arc Welding Fillet Lab OR	(3)
WLD	152	Basic Welding B	(5)
IMT	289	Industrial Maintenance Technology Capstone	1
		Subtotal	**28-32**

Technical Electives:

Fifteen (15) credit hours of electives must be taken from the approved list. The list is not all inclusive. Other technical elective courses may be taken with approval of the program instructor/advisor.

Subtotal	**15**
Total Credits	**49-53**

**If courses equaling 10 credits are taken, five (5) credits may be used as electives.

Certificates

Fluid Power Mechanic - 4703033129

(Offered at BLC, BSC, ELC, HEC, HPC, MYC, OWC, SMC,)

FPX	100	Fluid Power AND	3
FPX	101	Fluid Power Lab OR	2
ELT	265	Applied Fluid Power	(3)
MST	200	Advanced Hydraulic Systems AND	3
MST	201	Advanced Hydraulic Systems Lab OR	2
MST	204	Advanced Pneumatic Systems AND	(3)
MST	205	Advanced Pneumatic Systems Lab	(2)
		Total Credits	**8-10**

Industrial Maintenance Machinists Mechanic - 4703033119

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, JFC, MYC, OWC, SEC, SKY, SMC,WKC)

BRX	120	Basic Blueprint Reading OR	3
BRX	110	Basic Blueprint Reading for Machinist OR	(2)
BRX	112	Blueprint Reading for Machinist OR	(4)
ELT	102	Blueprint Reading	(2)
IMT	100	Welding for Maintenance AND	3
IMT	101	Welding for Maintenance Lab OR	2
WLD	120	Shielded Metal Arc Welding AND	(2)
WLD	121	Shielded Metal Arc Welding Fillet Lab OR	(3)
WLD	140	Gas Metal Arc Welding AND	(2)
WLD	141	Gas Metal Arc Welding Fillet Lab OR	(3)
WLD	152	Basic Welding B	(5)
IMT	115	Maintenance Machining I AND	2
IMT	116	Maintenance Machining I Lab OR	5
CMM	114	Fundamentals of Machine Tools OR	(7)
CMM	110	Fundamentals of Machine Tools -A AND	(3)
CMM	112	Fundamentals of Machine Tools -B	(4)
IMT	150	Maintaining Industrial Equipment I	3
IMT	151	Maintaining Industrial Equipment I Lab	2
		Total Credits	**19-21**

Industrial Maintenance Electrical Mechanic - 4703033159

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, JFC, MYC, OWC, SEC, SKY, SMC,WKC)

FPX	100	Fluid Power AND	3
FPX	101	Fluid Power Lab OR	2
ELT	265	Applied Fluid Power	(3)
IMT	110	Industrial Maintenance Electrical Principles AND	3
IMT	111	Industrial Maintenance Electrical Principles Lab OR	2
ELT	110	Circuits I OR	(5)
EET	119	Basic Electricity	(5)
IMT	220	Industrial Maintenance Electrical Motor Controls I AND	3
IMT	221	Industrial Maintenance Electrical Motor Controls I Lab OR	2
EET	270	Electrical Motor Controls I AND	(2)
EET	271	Electrical Motor Controls I Lab OR	(3)
ELT	244	Electrical Machinery and Controls OR	(4)
IMT	120	Industrial Maintenance Rotating Machinery AND	(3)
IMT	121	Industrial Maintenance Rotating Machinery Lab OR	(2)
EET	264	Rotating Machinery AND	(2)
EET	265	Rotating Machinery Lab OR	(2)
IMT	280	Advanced Programmable Logic Controllers AND	(3)
IMT	281	Advanced Programmable Logic Controllers Lab OR	(2)
EET	276	Programmable Logic Controllers AND	(2)
EET	277	Programmable Logic Controllers Lab	(2)
		Total Credits	**12-15**

Industrial Maintenance Mechanic Level I - 4703033139

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, JFC, MYC, OWC, SEC, SKY, SMC,WKC)

FPX	100	Fluid Power AND	3
FPX	101	Fluid Power Lab OR	2
ELT	265	Applied Fluid Power	(3)
IMT	110	Industrial Maintenance Electrical Principles AND	3
IMT	111	Industrial Maintenance Electrical Principles OR	2
ELT	110	Circuits I OR	(5)
EET	119	Basic Electricity	(5)
IMT	150	Maintaining Industrial Equipment I	3
IMT	151	Maintaining Industrial Equipment I Lab	2
		Total Credits	**13-15**

Industrial Maintenance Mechanic Level II - 4703033149

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, JFC, MYC, OWC, SEC, SKY, SMC,WKC)

BRX	120	Basic Blueprint Reading OR	3
BRX	110	Basic Blueprint Reading for Machinist OR	(2)
BRX	112	Blueprint Reading for Machinist OR	(4)
ELT	102	Blueprint Reading	(2)
FPX	100	Fluid Power AND	3
FPX	101	Fluid Power Lab OR	2
ELT	265	Applied Fluid Power	(3)
IMT	110	Industrial Maintenance Electrical Principles AND	3
IMT	111	Industrial Maintenance Electrical Principles OR	2
ELT	110	Circuits I OR	(5)
EET	119	Basic Electricity	(5)
IMT	100	Welding for Maintenance AND	3
IMT	101	Welding for Maintenance Lab OR	2
WLD	120	Shielded Metal Arc Welding AND	(2)
WLD	121	Shielded Metal Arc Welding Fillet Lab OR	(3)
WLD	140	Gas Metal Arc Welding AND	(2)
WLD	141	Gas Metal Arc Welding Fillet Lab OR	(3)
WLD	152	Basic Welding B	(5)
IMT	115	Maintenance Machining I AND	2
IMT	116	Maintenance Machining I Lab OR	5
CMM	114	Fundamentals of Machine Tools OR	(7)
CMM	110	Fundamentals of Machine Tools-A AND	(3)
CMM	112	Fundamentals of Machine Tools-B	(4)
		Total Credits	**22-26**

Electro-hydraulic Technician - 4703033169

(Offered at BLC, HPC, JFC, MYC, OWC, SMC)

IMT	110	Industrial Maintenance Electrical Principles AND	3
IMT	111	Industrial Maintenance Electrical Principles Lab OR	2
ELT	110	Circuits I OR	(5)
EET	119	Basic Electricity	(5)
FPX	100	Fluid Power AND	3
FPX	101	Fluid Power Lab OR	2
ELT	265	Applied Fluid Power	(3)
MST	206	Electro-hydraulic	3
MST	207	Electro-hydraulic Lab	2
		Total Credits	**13-15**

Chemical Operator - 4703033179

(Offered at MYC,WKC)

CHE	140	Introductory General Chemistry	3
CHE	145	Introductory General Chemistry Lab	1
GEN	276	Employment and Professional Skills	1
IMT	140	Industrial Mechanics	3
IMT	141	Industrial Mechanics Lab	1
ITE	250	Team Dynamics and Problem Solving	3
ISX	100	Industrial Safety	3
MAT	116	Technical Mathematics	3
PHX	150	Introduction to Physics	3
QMS	101	Introduction to Quality Systems	3
TEC	200	Technical Communications	3
		Digital Literacy	0-3
		Total Credits	**27-30**

Presswork and Die Maintenance Technician Level I – 4703033209

(Offered at OWC, SMC)

IMT	115	Maintenance Machining I AND	2
IMT	116	Maintenance Machining I Lab OR	5
CMM	114	Fundamentals of Machine Tools OR	(7)
CMM	110	Fundamentals of Machine Tools-A AND	(3)
CMM	112	Fundamentals of Machine Tools-B	(4)
IMT	100	Welding for Maintenance AND	3
IMT	101	Welding for Maintenance Lab	2
IMT	260	Presswork and Die Maintenance	7
		Total Credits	**19**

Presswork and Die Maintenance Technician Level II – 4703033219

(Offered at OWC, SMC)

IMT	115	Maintenance Machining I AND	2
IMT	116	Maintenance Machining I Lab OR	5
CMM	114	Fundamentals of Machine Tools OR	(7)
CMM	110	Fundamentals of Machine Tools-A AND	(3)
CMM	112	Fundamentals of Machine Tools-B	(4)
IMT	100	Welding for Maintenance AND	3
IMT	101	Welding for Maintenance Lab	2
IMT	260	Presswork and Die Maintenance	7
FPX	100	Fluid Power	3
FPX	101	Fluid Power Lab	2
IMT	110	Industrial Maintenance Electrical Principles	3
IMT	111	Industrial Maintenance Electrical Principles Lab	2
IMT	220	Industrial Maintenance Electrical Motor Controls I	3
IMT	221	Industrial Maintenance Electrical Motor Controls I Lab	2
		Total Credits	**34**

Industrial Maintenance Robotics Technician – 4703033239

(Offered at BSC, BLC, ELC, HPC, JFC, MYC, SMC,WKC))

IMT	110	Industrial Maintenance Electrical Principles AND	3
IMT	111	Industrial Maintenance Electrical Principles Lab OR	2
ELT	110	Circuits I OR	(5)
EET	119	Basic Electricity	(5)
FPX	100	Fluid Power AND	3
FPX	101	Fluid Power Lab OR	2
ELT	265	Applied Fluid Power	(3)
IMT	220	Industrial Maintenance Electrical Motor Controls I AND	3
IMT	221	Industrial Maintenance Electrical Motor Control I Lab OR	2
EET	270	Electrical Motor Controls I AND	(2)
EET	271	Electrical Motor Controls I Lab OR	(2)
ELT	244	Electrical Machinery and Controls OR	(4)
IMT	120	Industrial Maintenance Rotating Machinery AND	(3)
IMT	121	Industrial Maintenance Rotating Machinery Lab	(2)
IMT	280	Advanced Programmable Logic Controllers AND	3
IMT	281	Advanced Programmable Logic Controllers Lab OR	2
EET	276	Programmable Logic Controllers AND	(2)
EET	277	Programmable Logic Controllers Lab	(2)
IMT	150	Maintaining Industrial Equipment I	3
IMT	151	Maintaining Industrial Equipment I Lab	2
IMT	200	Industrial Robotic and Robotic Maintenance	4
		Total Credits	**25-29**

Marine Technology

The Marine Technology curriculum is designed to provide a strong theoretical base for employees of the inland marine industry. The program introduces students to basic inland marine principles and concepts by applying contemporary skills in a variety of employment positions based on industry needs. It provides students with a strong foundation of managerial and operational knowledge by using a problem-solving approach in state-of-the-art classroom and work experience environments. It builds leadership, management, communication skills, and professional ethics, which serve as a foundation for future development and career success. The program contains core technical courses and advanced courses in each track to address the employment needs of the domestic market.

Associate in Applied Science

Marine Technology – 4903997019

(Offered at WKC)

ENG	101	Writing I	3
MAT	116	Technical Mathematics or Higher Level Quantitative Reasoning Course	3
GEN	140	Development of Leadership	3
		Natural Sciences	3
		Heritage/Humanities	3
		Subtotal	**15**

Technical Core (required for all tracks):

		Digital Literacy	0-3
BAS	160	Introduction to Business	3
MRN	100	Introduction to Marine Technology	3
MRN	101	Anatomy of a Towboat	3
MRN	102	Basic Marine Safety	3
MRN	103	Applied Marine Weather	3
MRN	104	Marine Crew Wellness	3
MRN	203	Environmental Protection Rules	3
HSM	100	Introduction to Homeland Security	3
HSM	110	Introduction to Emergency Management	3
		Subtotal	**27-30**

Wheelhouse Management Track – 490399701

(Offered at WKC)

BAS	120	Personal Finance	3
BAS	283	Principles of Management	3
BAS	287	Supervisory Management	3
MRN	200	Shipboard Deck Operations	3
MRN	201	Rules of the Road	3
MRN	202	Piloting and Navigation	3
		Track Subtotal	**18**
		Track Total	**60-63**

Marine Engineering Track – 490399702

(Offered at WKC)

MRN	204	Marine Electrical Systems	5
MRN	206	Marine Diesel	5
MRN	212	Marine Fluid Systems	5
MRN	214	Marine Refrigeration Systems	4
		Track Subtotal	**19**
		Track Total	**61-64**

Marine Logistics Operations Track – 490399703

(Offered at WKC)

BAS	120	Personal Finance	3
BAS	283	Principles of Management	3
BAS	289	Operations Management	3
MRN	208	Inland River Systems	3
LOM	100	Introduction to Logistics Management	3
LOM	101	Transportation	3
		Track Subtotal	**18**
		Track Total	**60-63**

Marine Culinary Management Track – 490399705

(Offered at WKC)

BAS	120	Personal Finance	3
BAS	283	Principles of Management	3
CUL	100	Introduction to Culinary Arts	2
CUL	200	Sanitation and Safety	2
CUL	230	Basic Nutrition	3
CUL	280	Cost and Control	3
MRN	208	Inland River Systems	3
		Track Subtotal	**19**
		Track Total	**61-64**

Certificates

Marine Technology Business – 4903993019

(Offered at WKC)

		Digital Literacy	0-3
BAS	120	Personal Finance	3
BAS	160	Introduction to Business	3
BAS	283	Principles of Management	3
BAS	289	Operations Management	3
LOM	100	Introduction to Logistics Management	3
LOM	101	Transportation	3
		Total	**18-21**

Marine Industry - 4903993029

(Offered at WKC)

		Digital Literacy	0-3
MRN	100	Introduction to Marine Technology	3
MRN	101	Anatomy of a Towboat	3
MRN	102	Basic Marine Safety	3
MRN	103	Applied Marine Weather	3
MRN	104	Marine Crew Wellness	3
MRN	203	Environmental Protection Rules	3
		Total	**18-21**

Marine Culinary – 4903993039

(Offered at WKC)

		Digital Literacy	0-3
CUL	100	Introduction to Culinary Arts	2
CUL	200	Sanitation and Safety	2
CUL	230	Basic Nutrition	3
CUL	280	Cost and Control	3
MRN	100	Introduction to Marine Technology	3
MRN	208	Inland River Systems	3
		Total	**16-19**

Marine Engineering – 4903993049

(Offered at WKC)

MRN	203	Environmental Protection Rules	3
MRN	204	Marine Electrical Systems	5
MRN	206	Marine Diesel	5
MRN	212	Marine Fluid Systems	5
MRN	214	Marine Refrigeration Systems	4
		Total	**22**

Massage Therapy Technology

The Massage Therapy Technology degree offers a flexible, innovative curriculum designed to meet the changing needs of the health care marketplace with relation to Massage Therapy. The program will educate students in the principles of integrative massage modalities and the promotion of health and well-being. The program will provide students with the skills and knowledge necessary to work in a variety of settings, including but not limited to hospitals, massage clinics, rehabilitation clinics, spas, behavioral health clinics, wellness/fitness centers, doctor's offices, private practice offices, and athletic programs at the high school, college, or professional level.

The Massage Therapy Certificate Program will train Massage Therapist in techniques ranging from entry level Swedish Massage, for its therapeutic and relaxation benefits, through advanced clinical massage (sports and orthopedic massage) for the specific needs of athletes and to aid in recovery and rehabilitation from illness, injury and surgery. Using medical models, therapists will have expanded knowledge in Anatomy and Physiology, Kinesiology and Medical Terminology. Other modalities are introduced to the Massage Therapist's education to enhance their skills and knowledge. Business education is included in the program to assist therapists in the operation of a private practice.

CPR requirements must be successfully completed prior to enrolling in MSG 232, Advanced Clinical Massage I. The course must be Professional or Healthcare Provider. Completion of CPR 100 meets program requirements.

Associate in Applied Science

Massage Therapy Technology - 5109997019

(Offered at GTW)

ENG	101	Writing I	3
ENG	102	Writing II	3
COM	252	Introduction to Interpersonal Communication	3
		Quantitative Reasoning	3
BIO	135	Basic Anatomy and Physiology OR	4
BIO	137	Human Anatomy and Physiology I AND	(4)
BIO	139	Human Anatomy and Physiology II	(4)
PSY	110	General Psychology	3
		Social/Behavioral Sciences	3
		Heritage/Humanities	6
		Subtotal	**28-32**
		Digital Literacy	0-3
MIT	103	Medical Office Terminology OR	3
CLA	131	Medical Terminology from Greek and Latin OR	(3)
AHS	115	Medical Terminology	(3)
SFA	100	Safety and First Aid	1
BAS	200	Small Business Management OR	3
BAS	288	Personal and Organizational Leadership	(3)
MSG	117	Musculoskeletal Anatomy and Physiology I	4
MSG	119	Musculoskeletal Anatomy and Physiology II	4
MSG	132	Massage Technique I	3
MSG	134	Massage Technique II	3
MSG	232	Advanced Clinical Massage I	3
MSG	234	Advanced Clinical Massage II	3
MSG	286	Massage Therapy Student Clinic	2
MSG	220	Massage Therapy Practice	3
		Subtotal	**32-35**
		Total Credits (AAS)	**60-67**

Certificate

Massage Therapy - 5109993019

(Offered at GTW)

MIT	103	Medical Office Terminology OR	3
CLA	131	Medical Terminology from Greek and Latin OR	(3)
AHS	115	Medical Terminology	(3)
MSG	117	Musculoskeletal Anatomy and Physiology I	4
MSG	119	Musculoskeletal Anatomy and Physiology II	4
MSG	132	Massage Technique I	3
MSG	134	Massage Technique II	3
MSG	232	Advanced Clinical Massage I	3
MSG	234	Advanced Clinical Massage II	3
MSG	286	Massage Therapy Student Clinic	2
MSG	220	Massage Therapy Pathology	3
		Total Credits	**29**

Masonry

The Masonry program prepares students for employment in the construction of houses, commercial structures and other projects involving brick, stone and other masonry materials. This program includes blueprint reading, introductory, intermediate and advanced masonry projects. Cost estimating, preparing materials lists, and practical experiences are included.

Progression in the Masonry program is contingent upon achievement of a grade of "C" or better in each technical course and maintenance of a 2.0 cumulative grade point average.

Diploma

Construction Mason - 4601014019

(Offered at BLC, BSC, JFC, MYC)

General Education: 6-9 credit hour requirement for diplomas in areas 1-3

Area 1 =	Written Communication, Oral Communications, or Heritage/Humanities	3
Area 2 =	Social/Behavioral Sciences, Natural Sciences, or Quantitative Reasoning	3
	Subtotal	**6**

Technical Courses:

		Computer/Digital Literacy course OR demonstrated competency	0-3
BRX	220	Blueprint Reading for Construction	3
ISX	100	Industrial Safety OR	3
ISX	101	Introduction to Industrial Safety	(3)
MSY	105	Introductory Masonry	3
MSY	115	Intermediate Masonry	3
MSY	199	Cooperative Education OR	3
MSY	198	Practicum	(3)
MSY	205	Advanced Masonry	3
MSY	215	Masonry Lab	3
MSY	225	Brick Construction	3
MSY	235	Special Techniques in Brick Construction	3
MSY	245	Anchors and Reinforcement	3
MSY	275	Fireplace Construction	3
MSY	299	Cooperative Education OR	3
MSY	298	Practicum	(3)
		Technical Electives*	6
		Subtotal	**42-45**
		Total Credits	**48-51**

Technical Electives

MSY	251	Concrete Finishing	3
MSY	253	Masonry Floors and Steps	3
MSY	255	Glass Blocks and Tile	3
MSY	257	Stone	3

Electives (Optional):

MSY	291	Special Problems III	(3)

Certificates

Bricklayer Trainee - 4601013019

(Offered at BLC, BSC, JFC, MYC, SMC)

ISX	100	Industrial Safety OR	3
ISX	101	Introduction to Industrial Safety	(3)
MSY	105	Introductory Masonry	3
MSY	115	Intermediate Masonry	3
MSY	199	Cooperative Education OR	3
MSY	198	Practicum	(3)
MSY	205	Advanced Masonry	3
MSY	215	Masonry Lab	3
MSY	225	Brick Construction	3
MSY	235	Special Techniques in Brick Construction	3
MSY	245	Anchors and Reinforcement	3
		Total Credits	**27**

Bricklayer Helper - 4601013029

(Offered at BLC, BSC, JFC, MYC)

ISX	100	Industrial Safety OR	3
ISX	101	Introduction to Industrial Safety	(3)
MSY	105	Introductory Masonry	3
MSY	215	Masonry Lab	3
MSY	291	Special Problems III	3
		Total Credits	**12**

Construction Bricklayer - 4601013039

(Offered at BLC, BSC, JFC, MYC)

BRX	220	Blueprint Reading for Construction	3
ISX	100	Industrial Safety OR	3
ISX	101	Introduction to Industrial Safety	(3)
MSY	105	Introductory Masonry	3
MSY	115	Intermediate Masonry	3
MSY	199	Cooperative Education OR	3
MSY	198	Practicum	(3)
MSY	205	Advanced Masonry	3
MSY	215	Masonry Lab	3
MSY	225	Brick Construction	3
MSY	235	Special Techniques in Brick Construction	3
MSY	245	Anchors and Reinforcement	3
MSY	275	Fireplace Construction	3
MSY	299	Cooperative Education OR	3
MSY	298	Practicum	(3)
		Total Credits	**36**

Electives (Optional):

MSY	291	Special Problems III	(1-3)

Stone Mason - 4601013049

(Offered at BLC, BSC, JFC, MYC)

BRX	220	Blueprint Reading for Construction	3
MSY	105	Introductory Masonry	3
MSY	115	Intermediate Masonry	3
MSY	205	Advanced Masonry	3
MSY	215	Masonry Lab	3
MSY	245	Anchors and Reinforcement	3
MSY	253	Masonry Floors and Steps	3
MSY	257	Stone	3
MSY	275	Fireplace Construction	3
		Total Credits	**27**

Mechatronic Systems

A Mechatronic Systems Operating Technician will function as a well-grounded machine operator in a complex system, with responsibility for efficient operation of the equipment with minimal down-times.

Certificate

Mechatronic Systems Operating Technician - 1500003179

(Offered at JFC, SKY,WKC)

MES	110	Mechatronic Systems Electrical Components	4
MES	120	Mechatronic Systems Mechanical Components	4
MES	130	Mechatronic Systems Hydraulic / Pneumatic Components	4
MES	150	Mechatronic Systems Programmable Controllers	4
		Total Credits	**16**

Medical Administrative Services

Certificate

Medical Coding and Reimbursement Specialist - 5107133029

(Offered at JFC, SKY)

The Medical Coding and Reimbursement Specialist program insures that medical services are correctly identified on insurance claim forms. The individual codes the diagnoses and procedures performed, submits claim forms, researches and corrects insurance claim rejections. This program prepares graduates to file insurance forms for reimbursement and to code properly using the ICD, CPT and the HCPCS codes for patient diagnoses and procedures. Students are provided with an in-depth knowledge of medical terminology, anatomy, and coding procedures.

AHS	109	Introduction to Body Structure and Functions OR	4
BIO	130	Aspects of Human Biology OR	(3)
BIO	135	Basic Anatomy and Physiology with Laboratory OR	(4)
BIO	137	Human Anatomy and Physiology I AND	(4)
BIO	139	Human Anatomy and Physiology II	(4)
AHS	115	Medical Terminology OR	3
CLA	131	Medical Terminology from Greek and Latin OR	(3)
MIT	103	Medical Office Terminology	(3)
		Computer/Digital Literacy	3
MBS	100	Introduction to the Health Care Field OR	2
HIT	100	Introduction to Healthcare Delivery Systems	(2)
MBS	110	Medical Insurance and Claims Processing	6
MBS	120	Coding for Reimbursement OR	8
MIT	204	Medical Coding AND	(3)
MIT	205	Advanced Medical Coding	(3)
MBS	199	Internship	0-8
		Total Credits	**23-38**

Medical Assisting

A medical assistant is an integral member of the health care delivery team, qualified by education and experience to work in the administrative office, the examining room and the physician's laboratory. Individuals in this unique position will be involved in many of the following skills:

General: project a professional manner and image, adhere to legal and ethical principles, use medical terminology effectively, and use effective and correct verbal and written communication.

Administrative: schedule, coordinate and monitor appointments, perform telephone and written communications, arrange hospital admissions, manage medical records, process insurance claim forms, manage office financial records, and maintain inventory.

Clinical: prepare patient for examination procedures and treatment, record medical histories, take vital signs, chart patient information, administer medications and injections, provide patient instruction and education, perform venipunctures, collect and prepare other specimens, perform electrocardiograms (ECG), sterilize instruments, and perform basic laboratory tests.

With additional education, the medical assisting graduate may perform limited radiography.

The Medical Assistant is a vital liaison between the doctor and patient and plays an important role in diagnosis and treatment. The many different roles assumed in this profession assure a fast moving and challenging career.

Progression in the Medical Assisting program is contingent upon achievement of a grade of "C" or above in each required course and maintenance of a 2.0 cumulative grade-point average or above (on a 4.0 scale).

Clinical orientation and externship are "non-paid work assignments." CPR requirements must be successfully completed prior to enrolling in the first clinical externship and must be kept current throughout the program.

Transportation to the physician's offices/community agencies is the responsibility of each student.

According to the Commission on Accreditation of Allied Health Education Programs (CAAHEP), all accredited medical assisting program related courses must be taught by approved faculty and meet the requirements according to CAAHEP standards and guidelines.

The Medical Assisting programs at the colleges listed below are accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) on the recommendation of the Medical Assisting Education Review Board (MAERB).

Commission on Accreditation of Allied Health Education Programs
25400 US Highway 19 North, Suite 158
Clearwater, FL 33756,
727/210-2350
www.caahep.org

Bluegrass CTC (AAS and Diploma), Henderson CC (AAS), Jefferson CTC (Diploma), and Maysville CTC - Maysville & Rowan Campuses (Diploma).

Associate in Applied Science

Medical Assisting - 5108017029

(Offered at BLC, GTW, HEC, HPC, JFC)

Required General Education:

MAT	105	Mathematics for Business OR	3
MAT	110	Applied Mathematics OR	(3)
		Higher Level Quantitative Reasoning Course	(3)
BIO	135	Basic Anatomy and Physiology with Laboratory OR	4
BIO	137	Human Anatomy & Physiology I AND	(4)
BIO	139	Human Anatomy & Physiology II	(4)
PSY	110	General Psychology	3
ENG	101	Writing I	3
		Heritage/Humanities	3
		Subtotal	**16-20**

Additional Suggested General Education Courses (Not Required)

ENG	102	Writing II	(3)
COM	181	Basic Public Speaking OR	(3)
COM	252	Introduction to Interpersonal Communications	(3)

Support Classes

AHS	115	Medical Terminology OR	3
CLA	131	Medical Terminology from Greek and Latin OR	(3)
MIT	103	Medical Office Terminology	(3)
CPR	100	CPR for Health Care Professionals OR	1
KHP	190	First Aid and Emergency Care	(2)
		Digital Literacy	3
		Subtotal	**7-8**

NOTE: Credit for CPR 100 may be granted with proof of CPR certification for Health Care Professionals.

Core Courses

MAI	105	Introduction to Medical Assisting	3
MAI	120	Medical Assisting Laboratory Techniques I	3
MAI	140	Medical Assisting Clinical Procedures I	4
MAI	150	Medical Assisting Administrative Procedures I OR	3
MIT	217	Medical Office Procedures	(3)
MAI	170	Dosage Calculations	2
MAI	200	Pathophysiology for the Medical Assistant	3
MAI	220	Medical Assisting Laboratory Techniques II	3
MAI	230	Medical Insurance OR	3
MIT	104	Introduction to Medical Insurance	(3)
MAI	240	Medical Assisting Clinical Procedures II	4
MAI	250	Medical Assisting Administrative Procedures II OR	3
MIT	227	Medical Office Software	(3)
MAI	270	Pharmacology for the Medical Assistant	3
MAI	289	Medical Assisting Assessment Preparation	1-2
MAI	281	Medical Assisting Practicum	1
MAI	284	Medical Assisting Externship	2-3
		Subtotal	**38-40**
		Total Credits	**61-68**

Elective List:

OST	100	Keyboarding	(1)
MAI	260	Medical Transcription	(3)
MAI	299	Selected Topics: Medical Assisting: (Topic)	(1-4)

Diploma

Medical Assisting - 5108014020

(Offered at BLC, HEC, JFC, MYC, SEC, SMC)

General Education:

BIO	135	Basic Anatomy and Physiology with Laboratory OR	4
BIO	137	Human Anatomy & Physiology I AND	(4)
BIO	139	Human Anatomy & Physiology II	(4)
ENG	101	Writing I OR	3
TEC	200	Technical Communications	(3)
		Subtotal	**7-11**

Support Classes

AHS	115	Medical Terminology OR	3
AHS	120	Medical Terminology OR	(1)
CLA	131	Medical Terminology from Greek and Latin OR	(3)
MIT	103	Medical Office Terminology	(3)
CPR	100	CPR for Health Care Professionals OR	1
KHP	190	First Aid and Emergency Care	(2)
		Digital Literacy	3
		Subtotal	**5-8**

NOTE: Credit for CPR 100 may be granted with proof of CPR certification for Health Care Professionals.

Core Courses

MAI	105	Introduction to Medical Assisting	3
MAI	120	Medical Assisting Laboratory Techniques I	3
MAI	140	Medical Assisting Clinical Procedures I	4
MAI	150	Medical Assisting Administrative Procedures I OR	3
MIT	217	Medical Office Procedures	(3)
MAI	170	Dosage Calculations	2
MAI	200	Pathophysiology for the Medical Assistant	3
MAI	220	Medical Assisting Laboratory Techniques II	3
MAI	230	Medical Insurance OR	3
MIT	104	Introduction to Medical Insurance	(3)
MAI	240	Medical Assisting Clinical Procedures II	4
MAI	250	Medical Assisting Administrative Procedures II OR	3
MIT	227	Medical Office Software	(3)
MAI	270	Pharmacology for the Medical Assistant	3
MAI	289	Medical Assisting Assessment Preparation	1-2
MAI	281	Medical Assisting Practicum	1
MAI	284	Medical Assisting Externship	2-3
		Subtotal	**38-40**
		Total Credits	**50-59**

Elective Courses:

OST	100	Keyboarding	(1)
MAI	260	Medical Transcription	(3)
MAI	299	Selected Topics: Medical Assisting: (Topic)	(1-4)

Certificates

Medical Office Insurance Billing and Coding - 5108013049

(Offered at BLC, HEC, JFC, MYC, SEC, SMC)

AHS	115	Medical Terminology OR	3
AHS	120	Medical Terminology OR	(1)
CLA	131	Medical Terminology from Greek and Latin OR	(3)
MIT	103	Medical Office Terminology	(3)
BIO	135	Basic Anatomy and Physiology with Laboratory OR	4
BIO	137	Human Anatomy & Physiology I AND	(4)
BIO	139	Human Anatomy & Physiology II	(4)
MAI	150	Medical Assisting Administrative Procedures I OR	3
MIT	217	Medical Office Procedures	(3)
MAI	230	Medical Insurance OR	3
MIT	104	Introduction to Medical Insurance	(3)
MAI	250	Medical Assisting Administrative Procedures II OR	3
MIT	227	Medical Office Software	(3)
MAI	281	Medical Assisting Practicum	1
		Digital Literacy	3
		Total Credits	**18-24**

Medical Office Administrative Assistant - 5108013069

(Offered at BLC, HEC, JFC, MYC, SEC, SMC)

AHS	115	Medical Terminology OR	3
AHS	120	Medical Terminology OR	(1)
CLA	131	Medical Terminology from Greek and Latin OR	(3)
MIT	103	Medical Office Terminology	(3)
BIO	135	Basic Anatomy and Physiology with Laboratory OR	4
BIO	137	Human Anatomy & Physiology I AND	(4)
BIO	139	Human Anatomy & Physiology II	(4)
MAI	105	Introduction to Medical Assisting	3
MAI	150	Medical Assisting Administrative Procedures I OR	3
MIT	217	Medical Office Procedures	(3)
MAI	250	Medical Assisting Administrative Procedures II OR	3
MIT	227	Medical Office Software	(3)
MAI	281	Medical Assisting Practicum	1
		Digital Literacy	3
		Total Credits	**18-24**

Electrocardiograph Technician - 5108013149

(Offered at JFC, MYC)

AHS	115	Medical Terminology OR	3
AHS	120	Medical Terminology OR	(1)
CLA	131	Medical Terminology from Greek and Latin OR	(3)
MIT	103	Medical Office Terminology	(3)
BIO	135	Basic Anatomy and Physiology with Laboratory OR	4
BIO	137	Human Anatomy & Physiology I AND	(4)
BIO	139	Human Anatomy & Physiology II	(4)
CPR	100	CPR for Healthcare Professionals OR	1
KHP	190	First Aid and Emergency Care	(2)
MAI	140	Medical Assisting Clinical Procedures I OR	4
MAI	240	Medical Assisting Clinical Procedures II	(4)
MAI	281	Medical Assisting Practicum	1
		Total Credits	**11-18**

NOTE: Credit for CPR 100 may be granted with proof of CPR certification for Health Care Professionals.

Medical Office Limited Radiography - 5108013139

(Offered at JFC)

MOR	100	Medical Office Limited Radiography	6
MOR	115	Medical Office Limited Radiography Lab	3
MOR	117	Advanced Medical Office Limited Radiography	6
MOR	119	Advanced Medical Office Limited Radiography Clinical	3
		Total Credits	**18**

Phlebotomist - 5108013109

(Offered at ASC, BLC, GTW, HEC, MYC, SEC)

PHB	100	Phlebotomy	6
PHB	155	Phlebotomy Clinical	2-3
		Total Credits	**8-9**
		OR	
MAI	120	Medical Assisting Laboratory Techniques I	3
PHB	155	Phlebotomy Clinical	2-3
		Total Credits	**5-6**
		OR	
MAI	120	Medical Assisting Laboratory Techniques I	3
PHB	152	Phlebotomy: Clinical Experience	1
		Total Credits	**4**

NOTE: See http://www.phlebotomy.com/CertAgencies.html for a directory of phlebotomy certification agencies and examination requirements.

*A competency level of successful completion of MAT 065, RDG 030 and ENC 091 must be attained for any certificate.

Medical Laboratory Technician

The Medical Laboratory Technician (MLT) program provides students with the opportunity to acquire the necessary skills to work under the supervision of a registered clinical scientist or pathologist in a clinical laboratory, hospital, or other health agency.

The MLT student learns to collect specimens from the patient and perform laboratory tests in all areas of the clinical laboratory to include immunohematology, clinical chemistry, hematology, microbiology, serology and urinalysis.

Students enrolled in the MLT program must achieve a minimum grade of "C" in each of the medical laboratory technician courses.

Upon completion of the program, the graduate is eligible for the national certification examination as a medical laboratory technician.

The following Associate Degree Medical Laboratory Technician Programs are fully accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). Address and telephone number of NAACLS are: NAACLS, 5600 North River Road, Suite 720, Rosemont, Illinois 60018. Telephone: 773.714.8880 Fax: 773.714.8886 (Website): http://www.naacls.org (E-mail): info@naacls.org.

Henderson Community College, Madisonville Community College, Somerset Community College, Southeast Kentucky Community and Technical College, West Kentucky Community and Technical College, and Jefferson Community and Technical College (Accreditation Pending).

All program graduates take the national board exam, called the Board of Certification of the American Society of Clinical Pathology, after having met their academic and laboratory educational requirements. If successful, graduates may then use the initials "MLT (ASCP)" indicating proficiency in laboratory medicine.

Associate in Applied Science

Medical Laboratory Technician - 5110047049

(Offered at HEC, JFC, MDC, MYC, SEC, SMC,WKC)

General Education Courses:

ENG	101	Writing I	3
MAT	110	Applied Mathematics OR	3
		Higher Quantitative Reasoning course	(3)
CHE	130	Introductory General and Biological Chemistry OR	4
		Higher Chemistry course	(3)
PSY	110	General Psychology	3
		Heritage/Humanities	3
COM	181	Basic Public Speaking OR	3
COM	252	Introduction to Interpersonal Communication	(3)
		Subtotal	**18-19**

Core Courses:

		Digital Literacy	0-3
BIO	135	Basic Anatomy & Physiology with Laboratory*	4
MLT	112	Urinalysis	2
MLT	115	Serology	2
MLT	215	Hematology I AND	4
MLT	216	Hematology II OR	3
MLT	217	Fundamentals of Hematology AND	(3)
MLT	218	Clinical Hematology	(4)
MLT	225	Immunohematology I AND	2
MLT	226	Immunohematology II OR	2
MLT	227	Immunohematology	(4)
MLT	278	Practicum	
		Pathway 1	4
		Pathway 2	5
		Subtotal	**23-27**

*BIO 137 & BIO 139 may be substituted for BIO 135

Pathway I – 511004703

(Offered at SMC, SEC, HEC)

BIO	225	Medical Microbiology	4
MLT	101	Introduction to the Clinical Laboratory AND	3
PHB	151	Phlebotomy for the Health Care Worker AND	1
PHB	152	Phlebotomy: Clinical Experience	1
MLT	205	Clinical Microbiology I AND	3
MLT	206	Clinical Microbiology II	2
MLT	233	Clinical Chemistry I AND	3
MLT	234	Clinical Chemistry II	2
MLT	279	Practicum II	4
		Subtotal	**23**
		Total Credit Hours – Pathway I	**64-68**

Pathway II – 511004704

(Offered at JFC, MDC, MYC,WKC)

MLT	207	Introduction to Clinical Diagnostic Microbiology	2
PHB	170	Applied Phlebotomy AND	3
PHB	152	Phlebotomy Clinical Experience	1
MLT	208	Clinical Diagnostic Microbiology I AND	3
MLT	209	Clinical Diagnostic Microbiology II	2
MLT	247	Introduction to Clinical Chemistry AND	3
MLT	248	Advanced Clinical Chemistry	3
MLT	279	Practicum II	5
		Subtotal	**22**
		Total Credit Hours – Pathway II	**64-68**

Diploma

Certified Medical Laboratory Assistant – 5110044029

(Offered at MDC)

General Education Courses:

Course from Area I:

ENG	101	Writing I	3

Course from Area II:

MAT	110	Applied Mathematics OR	3
		Higher Quantitative Reasoning course	(3)
		Subtotal	**6**

Support Courses:

		Digital Literacy	0-3
BIO	135	Basic Anatomy & Physiology with Laboratory*	4
BIO	225	Medical Microbiology OR	4
MLT	207	Introduction to Clinical Diagnostic Microbiology	(2)
		Subtotal	**6-11**

*BIO 137 & BIO 139 may be substituted for BIO 135.

Technical Courses:

MLT	101	Introduction to the Clinical Laboratory AND	3
PHB	151	Phlebotomy for the Health Care Worker AND	1
PHB	152	Phlebotomy: Clinical Experience AND	1
MLT	225	Immunohematology I OR	2
PHB	170	Applied Phlebotomy AND	(3)
PHB	152	Phlebotomy: Clinical Experience	(1)
MLT	112	Urinalysis	2
MLT	115	Serology	2
MLT	217	Fundamentals of Hematology OR	3
MLT	215	Hematology I	(4)
MLT	247	Introduction to Clinical Chemistry OR	3
MLT	233	Clinical Chemistry I	(3)
MLT	275	Clinical Experience	1
MLT	278	Practicum I	4
OST	217	Medical Office Procedures OR	3
MAI	150	Medical Assisting Administrative Procedures I	(3)
		Subtotal	**22-26**
		Total	**34-43**

Certificates

Physician's Office Laboratory – 5110043029

(Offered at HEC, HZC, JFC, MDC, SEC, SMC,WKC)

PHB	151	Phlebotomy AND	1
PHB	152	Phlebotomy Clinical Experience AND	1
MLT	101	Introduction to the Clinical Laboratory OR	3
PHB	170	Applied Phlebotomy AND	(3)
PHB	152	Phlebotomy Clinical Experience	(1)
MLT	112	Urinalysis	2
MLT	115	Serology	2
		Total	**8-9**

Phlebotomist - 5110043019

(Offered at HZC, JFC, MDC, MYC)

PHB	100	Phlebotomy	6
PHB	155	Phlebotomy Clinical	2-3
		Total	**8-9**

Phlebotomy for the Health Care Worker - 5110043039

(Offered at HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC,WKC)

PHB	151	Phlebotomy AND	1
PHB	152	Phlebotomy: Clinical Experience AND	1
MLT	101	Introduction to the Clinical Laboratory OR	3
PHB	170	Applied Phlebotomy AND	(3)
PHB	152	Phlebotomy: Clinical Experience	(1)
		Total	**4-5**

Advanced Phlebotomy Technician - 5110043049

(Offered at HZC, SEC,)

PHB	151	Phlebotomy AND	1
PHB	152	Phlebotomy: Clinical Experience AND	1
PHB	155	Phlebotomy Clinical AND	2
MLT	101	Introduction to the Clinical Laboratory OR	3
PHB	151	Phlebotomy AND	(1)
PHB	153	Advanced Topics in Phlebotomy AND	(4)
PHB	155	Phlebotomy Clinical OR	(3)
PHB	170	Applied Phlebotomy AND	(3)
PHB	152	Phlebotomy: Clinical Experience AND	(1)
PHB	155	Phlebotomy Clinical	(2)
		Total	**6-8**

Mining Technology

The Mining Technology program will focus on the knowledge needed to succeed in the coal mining industry. Emphasis will be given to the statutory rights and safety procedures in all of the offerings including: the self-rescuer device, transportation controls, communication controls, mining conditions, mining methods, mining cycle, escapeways, emergency procedures, roof control, ground control, ventilation, health hazards, clean-up and rock dusting, health and safety aspects of assigned task, mine gases, explosives, compressed cylinders, electrical hazards, first aid, operation of equipment, electrical knowledge and troubleshooting, repairing electrical and fluid power equipment, maintaining the equipment, fabricating, supervising, and the engineering aspects of mining.

Associate in Applied Science

Mining Technology - 1509017019

(Offered at BSC, MDC)

General Education:

ENG	101	Writing I	3
		Quantitative Reasoning course*	3
		Social/Behavioral Sciences course	3
GLY	101	Physical Geology AND	3
GLY	111	Laboratory for Physical Geology OR	1
		Natural Sciences	(4)
		Heritage/Humanities	3
		Subtotal	**16**

*Note: MAT 150 is required for Engineering Operations Track and Supervisors Track.

Technical Core:

		Digital Literacy	3
MNG	102	Introduction to Mine Engineering and Mining Technology	3
MNG	160	Elements of Underground Mining	3
MNG	170	Elements of Surface Mining	2
MNG	150	Mining Laws	3
BAS	160	Introduction to Business	3
EFM	100	Personal Financial Management OR	3
BAS	120	Personal Finance	(3)
MNG	274	Mine Safety	3
MNG	180	Environmental Issues in Mining	3
		Subtotal	**26**

Operators Track – 150901702

(Offered at BSC, MDC)

IMT	150	Maintaining Industrial Equipment I	3
IMT	151	Maintaining Industrial Equipment I Lab	2
MNG	161	Elements of Underground Mining Lab	1-3
MNG	171	Elements of Surface Mining Lab	1-3
		Technical Electives*	11-13
		Subtotal	**18-24**
		Total Credits	**60-66**

Electricians Track - 150901703

(Offered at BSC, MDC)

MNG	123	Mining Electricity I AND	4
MNG	125	Mining Electricity I Lab OR	1
IMT	110	Industrial Maintenance Electrical Principles AND	(3)
IMT	111	Industrial Maintenance Electrical Principles Lab	(2)
ELT	244	Electrical Machinery and Controls OR	4
		Equivalent course	
IMT	150	Maintaining Industrial Equipment I	3
IMT	151	Maintaining Industrial Equipment I Lab	2
ELT	250	Programmable Logic Controllers	4
		Technical Electives*	2
		Subtotal	**20**
		Total Credits	**62**

Supervisors Track - 150901704

(Offered at BSC, MDC)

ACT	101	Fundamentals of Accounting I	3
MNG	286	Roof Control and Ventilation	3
BAS	283	Principles of Management	3
BAS	288	Personal and Organizational Leadership	3
		Technical Electives*	8
		Subtotal	**20**
		Total Credits	**62**

Mechanics Track - 150901705

(Offered at BSC, MDC)

		Blueprint Reading course	2-3
ELT	265	Applied Fluid Power OR	3
FPX	100	Fluid Power AND	(3)
FPX	101	Fluid Power Lab	(2)
ELT	122	Mechanical Power Transmission Systems	3
IMT	100	Welding for Maintenance	3
IMT	101	Welding for Maintenance Lab	2
IMT	150	Maintaining Industrial Equipment I	3
IMT	151	Maintaining Industrial Equipment I Lab	2
		Technical Electives*	2
		Subtotal	**20-23**
		Total Credits	**62-65**

Engineering Operations Track - 150901701

(Offered at BSC, MDC)

MA	112	Trigonometry OR	2
MAT	155	Trigonometry	(3)
		Blueprint Reading course	2-3
MNG	286	Roof Control and Ventilation	3
		Technical Electives*	12
		Subtotal	**19-21**
		Total Credits	**61-63**

***Technical Electives:**

Any AIT, EET, ELT, IMT, CIT, ISM, ENV, SMT, CAD, ICT, MNG, MFG or any other course as approved by the program coordinator.

Diploma

Underground Mining Repair Technology -1509014019

General Education:

Area 1 =		Written Communication, Oral Communications, or Heritage/Humanities	3
Area 2 =		Social/Behavioral Sciences, Natural Sciences, or Quantitative Reasoning	3
		Subtotal	**6**

Technical Courses:

		Blueprint Reading Course	2-3
		Digital Literacy course or demonstrated competency	0-3
EFM	100	Personal Financial Management OR	3
BAS	120	Personal Finance	(3)
IMT	100	Welding for Maintenance	3
IMT	101	Welding for Maintenance Lab	2
ELT	250	Programmable Logic Controllers	4
ELT	265	Applied Fluid Power OR	3
FPX	100	Fluid Power AND	(3)
FPX	101	Fluid Power Lab	(2)
IMT	150	Maintaining Industrial Equipment I	3
IMT	151	Maintaining Industrial Equipment I Lab	2
MNG	123	Mining Electricity AND	4
MNG	125	Mining Electricity I Lab OR	1
IMT	110	Industrial Maintenance Electrical Principles AND	(3)
IMT	111	Industrial Maintenance Electrical Principles Lab	(2)
MNG	190	Mine Emergency Technician OR	3
KHP	190	First Aid & Emergency Care	(2)
MNG	185	Permissibility	3
MNG	274	Mine Safety	3
		Technical Electives*	9-12
		Subtotal	**44-54**
		Total Credits	**50-60**

***Technical Electives:**

Any AIT, EET, ELT, IMT, CIT, ISM, ENV, SMT, CAD, ICT, MNG, MFG or any other course as approved by the program coordinator.

Certificates

Underground Operator 1509013129

(Offered at BSC, MDC, SEC)

MNG	160	Elements of Underground Mining	3
MNG	161	Elements of Underground Mining Lab	1-3
EFM	100	Personal Financial Management OR	3
BAS	120	Personal Finance OR	(3)
WPP	200	Workplace Principles	(3)
		Total Credits	**7-9**

Underground Mechanic/Electrician - 1509013069

(Offered at MDC, SEC)

		Digital Literacy	0-3
		Blueprint Reading course	2-3
MNG	123	Mining Electricity I	4
MNG	125	Mining Electricity I Lab	1
IMT	100	Welding for Maintenance	3
IMT	101	Welding for Maintenance Lab	2
ELT	244	Electrical Machinery and Controls OR	4
IMT	110	Industrial Maintenance Electrical Principles AND	(3)
IMT	111	Industrial Maintenance Electrical Principles Lab	(2)
ELT	250	Programmable Logic Controllers	4
ELT	265	Applied Fluid Power OR	3
FPX	100	Fluid Power AND	(3)
FPX	101	Fluid Power Lab	(2)
IMT	150	Maintaining Industrial Equipment I	3
IMT	151	Maintaining Industrial Equipment I Lab	2
		Total Credits	**28-35**

Underground Supervisor - 1509013079

(Offered at BSC, MDC, SEC)

MNG	150	Mining Laws	3
MNG	274	Mine Safety	3
MNG	190	Mine Emergency Technician OR	3
KHP	190	First Aid & Emergency Care	(2)
BAS	160	Introduction to Business	3
MNG	286	Roof Control and Ventilation	3
		Digital Literacy	0-3
		Blueprint Reading course	2-3
		Total Credits	**16-21**

Surface Operator - 1509013139

(Offered at BSC, MDC, SEC)

MNG	170	Elements of Surface Mining	2
MNG	171	Elements of Surface Mining Lab	1-3
EFM	100	Personal Financial Management OR	3
BAS	120	Personal Finance OR	(3)
WPP	200	Workplace Principles	(3)
HEO	125	Special Problems I OR	3
		Technical Elective	(3)
		Total Credits	**9-11**

Surface Supervisor - 1509013099

(Offered at BSC, MDC, SEC)

		Digital Literacy	0-3
		Blueprint Reading Course	2-3
MNG	150	Mining Laws	3
MNG	190	Mine Emergency Technician OR	3
KHP	190	First Aid & Emergency Care	(2)
MNG	274	Mine Safety	3
BAS	160	Introduction to Business	3
		Total Credits	**13-18**

Surface Field Mechanic - 1509013109

(Offered at BSC, MDC, SEC)

ELT	122	Mechanical Power Transmission Systems	3
ELT	265	Applied Fluid Power OR	3
FPX	100	Fluid Power AND	(3)
FPX	101	Fluid Power Lab	(2)
IMT	100	Welding for Maintenance	3
IMT	101	Welding for Maintenance Lab	2
		Total Credits	**11-13**

Surface Technician/Greaser - 1509013119

(Offered at BSC, SEC)

PMX	100	Precision Measurement	3
DIT	103	Preventive Maintenance Lab	2
ELT	122	Mechanical Power Transmission Systems	3
		Total Credits	**8**

Mining Technician Assistant I - 1509013019

(Offered at BSC, SEC)

PMX	100	Precision Measurement	3
DIT	103	Preventive Maintenance Lab	2
IMT	100	Welding for Maintenance	3
IMT	101	Welding for Maintenance Lab	2
		Total Credits	**10**

Mining Technician Assistant II - 1509013029

(Offered at MDC, SEC)

MNG	123	Mining Electricity I	4
MNG	125	Mining Electricity Lab	1
ELT	265	Applied Fluid Power OR	3
FPX	100	Fluid Power AND	(3)
FPX	101	Fluid Power Lab	(2)
		Total Credits	**8-10**

Mining Technician I - 1509013039

(Offered at BSC, MDC, SEC)

		Digital Literacy	0-3
MNG	160	Elements of Underground Mining	3
MNG	150	Mining Laws	3
MNG	286	Roof Control and Ventilation	3
		Total Credits	**9-12**

Mining Technician II - 1509013049

(Offered at BSC, MDC, SEC)

		Digital Literacy	0-3
MNG	123	Mining Electricity I	4
MNG	125	Mining Electricity Lab	1
MNG	150	Mining Laws	3
MNG	286	Roof Control and Ventilation	3
MNG	190	Mine Emergency Technician OR	3
KHP	190	First Aid & Emergency Care	(2)
IMT	100	Welding for Maintenance	3
IMT	101	Welding for Maintenance Lab	2
		Total Credits	**18-22**

Motorcycle Technology

The Motorcycle Technology Program prepares students for careers in a motorcycle dealership or private business. A core curriculum provides students with a foundation of knowledge applicable to the motorcycle industry.

Associate in Applied Science

Motorcycle Technology - 4706117019

(Offered at BSC)

General Education

ENG	101	Writing I	3
MAT	110	Applied Math	3
		Heritage/Humanities	3
		Social/Behavioral Sciences	3
		Natural Sciences	3
		Oral Communications	3
		Subtotal	**18**

Technical Core

		Computer/Digital Literacy	0-3
MOT	100	Introduction to Motorcycles	3
OST	105	Introduction to Information Systems	3
MOT	120	Motorcycle Sales and Marketing	3
MOT	130	Shop Management	2
MOT	134	Service Requirements	2
MOT	244	Parts Management	2
MOT	260	Capstone	4
COE	199	Cooperative Education or	3
COED	198	Practicum	(3)
		Subtotal	**22-25**

Repair Track - 470611701

(Offered at BSC)

FEX	100	Fundamentals of Electricity	3
MOT	142	Basic Engines and Drive Systems	2
MOT	156	Frames and Suspensions	2
MOT	200	Advanced Engines and Drive Systems	2
MOT	220	Diagnostics and Troubleshooting	2
MOT	234	Performance Machine and Welding	2
		Approved Technical Electives	9
		Subtotal	**22**
		Total Credits (Repair Track)	**62-65**

Retail Track - 470611702

(Offered at BSC)

BAS	200	Small Business Management	3
ACC	201	Financial Accounting	3
		Approved Technical Electives	15
		Subtotal	**21**
		Total Credits (Retail Track)	**61-64**

Certificates

Repair Technician II - 4706113029

Technical Courses

MOT	100	Introduction to Motorcycles	3
OST	105	Introduction to Information Systems	3
MOT	120	Motorcycle Sales and Marketing	3
MOT	130	Shop Management	2
MOT	134	Service Requirements	2
MOT	142	Basic Engines and Drive Systems	2
MOT	156	Frames and Suspensions	2
MOT	200	Advanced Engines and Troubleshooting	2
MOT	220	Diagnostics and Troubleshooting	2
MOT	234	Performance Machining and Welding	2
MOT	244	Parts and Management	2
		Total	**25**

Repair Technician I - 4706113019

(Offered at BSC)

Technical Courses

MOT	100	Introduction to Motorcycles	3
OST	105	Introduction to Information Systems	3
MOT	120	Motorcycle Sales and Marketing	3
MOT	130	Shop Management	2
MOT	134	Service Requirements	2
MOT	142	Basic Engines and Drive Systems	2
		Total	**15**

Retail Technician II - 4706113049

Technical Courses

MOT	100	Introduction to Motorcycles	3
OST	105	Introduction to Information Systems	3
MOT	120	Motorcycle Sales and Marketing	3
BAS	200	Small Business Management	3
MOT	130	Shop Management	2
ACC	201	Financial Accounting	3
		Approved Technical Electives	12
		Total	**29**

Retail Technician I - 4706113039

Technical Courses

MOT	100	Introduction to Motorcycles	3
OST	105	Introduction to Information Systems	3
MOT	120	Motorcycle Sales and Marketing	3
BAS	200	Small Business Management	3
		Approved Technical Electives	6
		Total	**18**

Approved Technical Electives Repair Track:

CIS	130	Microcomputer Application	3
CRT	100	Introduction to Collision Repair	2
CMM	110	Fundamentals of Machine Tools A	3

Note: Other Electives may be approved by the Program Coordinator

Approved Technical Electives Retail Track:

CIS	130	Microcomputer Application	3
IT	132	Web Page Development	3
ACC	202	Managerial Accounting	3
BAS	267	Introduction to Business Law	3
BAS	274	Human Resource Management	3
BAS	283	Principles of Management	3
BAS	291	Retail Management	3

Multi-Skilled Systems Technician

Introduces the systems approach to the operation of electrical components and the relationship of voltage, current, resistance, and power in industrial systems. Provides an overview of alternating and direct current fundamentals. Introduces the systems approach to the operation of mechanical components and the relationship of their application in industrial systems. Provides an overview of rotating machinery fundamentals. Introduces the systems approach to the operation of hydraulic/pneumatic components and the relationship of their application in industrial systems. Provides an overview of digital fundamentals.

Certificate

Multi-Skilled Technician - 4703033229

(Offered at JFC, SMC)

MST	150	Multi-Skilled Systems Technician	9
		Total Credits	**9**

Natural Gas Technology

Construction and Maintenance Technician

This program prepares students for performing job tasks in five functional areas of pipeline construction and maintenance; work related safety, installing and inspecting gas distribution piping, maintenance on gas pipelines, placing pipelines into service and installing and monitoring cathodic protection systems. Classroom instruction and documented related skill performance prepares students to perform job related tasks at the technician level. Persons completing the program are "operator qualified" on related covered tasks according to 49CFR, Part 192, Subpart N.

Gas Service Technician

This program prepares students for job related tasks in six functional areas of natural gas service; work related safety, installing and maintaining customer services lines and meter and regulator sets, installing gas operated equipment, installing and inspecting gas distribution piping and monitoring cathodic protection systems. Classroom instruction and documented related skill performance prepares students to perform job related tasks at the technician level. Persons completing the program are "operator qualified" on related covered tasks according to 49CFR, Part 192, Subpart N.

Leakage and Corrosion Control Technician

This program prepares students for performing job tasks in four functional areas of natural gas leakage and corrosion control; work related safety, investigating and controlling gas leaks, installing cathodic protection systems, and monitoring cathodic protection systems. Classroom instruction and documented related skill performance prepares students to perform job related tasks at the technician level. Persons completing the program are "operator qualified" on related covered tasks according to 49CFR, Part 192, Subpart N.

Measurement and Regulation Technician

This program prepares students for performing job tasks in five functional areas of natural gas measurement and regulation; work related safety, basic gas laws, maintaining gas metering systems, maintaining gas regulation systems, and maintaining recording instruments. Classroom instruction and documented related skill performance prepares students to perform job related tasks at the technician level.

Certificates

Leakage and Corrosion Control Technician - 1509033020

(Offered at SMC)

NGT	100	Technologies Basic to the Delivery of Natural Fuel Gases	3
NGT	110	Preventing/Controlling Worksite Incidents	3
NGT	130	Maintaining Compliance with 49 Code of Federal Regulations (CFR), Part 192	1
NGT	140	Pipeline Construction Safety	3
NGT	150	Performing Patrol & Leakage Surveys on Natural Gas Pipeline Facilities	3
NGT	205	Identifying Practices & Procedures Used to Control and Monitor Cathodic Protection Systems	2
NGT	210	Troubleshooting Cathodic Protection Rectifiers	3
		Total Credits	**18**

Gas Service Technician - 1509033040

(Offered at SMC)

NGT	100	Technologies Basic to the Delivery of Natural Fuel Gases	3
NGT	110	Preventing/Controlling Worksite Incidents	3
NGT	125	Maintaining Compliance with the National Fuel Gas Code NFPA 54 and ANSI Z223.1	1
NGT	150	Performing Patrol & Leakage Surveys on Natural Gas Pipeline Facilities	3
NGT	160	Installing & Maintaining Customer Service Lines and Meter and Regulator Sets	3
NGT	170	Installing Gas Operated Equipment	3
NGT	180	Installing and Inspecting Gas Distribution Piping	3
NGT	230	Inspecting & Maintaining Gas Metering Systems	3
		Total Credits	**22**

Measurement and Regulation Technician - 1509033030

(Offered at SMC)

NGT	100	Technologies Basic to the Delivery of Natural Fuel Gases	3
NGT	110	Preventing/Controlling Worksite Incidents	3
NGT	130	Maintaining Compliance with 49 Code of Federal Regulations (CFR), Part 192	1
NGT	140	Pipeline Construction Safety	3
NGT	150	Performing Patrol & Leakage Surveys on Natural Gas Pipeline Facilities	3
NGT	205	Identifying Practices & Procedures Used to Control and Monitor Cathodic Protection Systems	2
NGT	220	Identifying Principles & Performing Operations Basic to Gas Measurement	3
NGT	230	Inspecting & Maintaining Gas Metering Systems	3
NGT	240	Operating & Maintaining Gas Pressure Regulating Systems	3
		Total Credits	**24**

Construction and Maintenance Technician - 1509033010

(Offered at SMC)

NGT	100	Technologies Basic to the Delivery of Natural Fuel Gases	3
NGT	110	Preventing/Controlling Worksite Incidents	3
NGT	130	Maintaining Compliance with 49 Code of Federal Regulations (CFR), Part 192	1
NGT	140	Pipeline Construction Safety	3
NGT	180	Installing & Inspecting Gas Distribution Piping	3
NGT	190	Performing Maintenance on Gas Pipelines	3
NGT	200	Placing Gas Pipelines into Service	3
NGT	205	Identifying Practices & Procedures Used to Control and Monitor Cathodic Protection Systems	2
		Total Credits	**21**

Nuclear Medicine and Molecular Imaging Technology

The Nuclear Medicine and Molecular Imaging Technology (NMMIT) program prepares the individual to work in the field of Nuclear Medicine and Molecular Imaging. Nuclear Medicine and Molecular Imaging is the medical specialty that utilizes the nuclear properties of radioactive and stable nuclides to make diagnostic evaluation of the anatomic or physiologic conditions of the body and to provide therapy with unsealed radioactive materials. The skills of the nuclear medicine technologist complement those of the nuclear medicine physician and other professionals in the field. Nuclear medicine technologists have responsibilities in the following areas: (a) patient care and monitoring, (b) technical skills related to radiation safety, radiopharmacy, clinical instrumentation, diagnostic and therapeutic procedures (including hybrid imaging and emerging technologies), quality control, and computers, and (c) administrative functions related to supplies and equipment, documentation of operations related to disposition of radioactive materials, quality control data, and patient records.

The NMMIT program is a selective admission program. A student must earn a grade of C or better in the prerequisite and concurrent mathematics and science courses to be admitted to and to remain enrolled in the program. Also, a student must earn a grade of C or better in each of the NMMIT courses to be retained in the program. After graduation from the program, the individual is eligible to write either the Nuclear Medicine Technology Certification Board (NMTCB) or the American Registry of Radiologic Technologists (ARRT) nuclear medicine technology examination to earn credentials. Please see the guidelines for the selective admission requirements to the Nuclear Medicine and Molecular Imaging Technology program.

Documentation of computer literacy as defined by KCTCS is required prior to enrolling in the first NMI course.

Note: Hours Exception (71-73 for the A.A.S.) approved by the KCTCS Board of Regents in December 2010

Associate in Applied Science

Nuclear Medicine and Molecular Imaging Technology - 5109057039

(Offered at BLC)

General Education:

ENG	101	Writing I	3
ENG	102	Writing II	3
MAT	150	College Algebra OR	3
MA	109	College Algebra	(3)
CHE	140	Introductory General Chemistry	3
CHE	150	Introduction to Organic and Biological Chemistry	3
CHE	155	Introduction to Organic and Biological Chemistry Lab	1
BIO	137	Human Anatomy & Physiology I	4
BIO	139	Human Anatomy & Physiology II	4
PHY	171	Applied Physics OR	4
PHY	172	Physics for Health Sciences	(2)
		Social/Behavioral Sciences	3
		Heritage/Humanities	3
		Oral Communications Course	3
		Subtotal	**35-37**

Technical Courses:

NMI	140	Clinical Procedures I	2
NMI	141	Physics and Instrumentation I	2
NMI	142	Radiation Biology/Protection	1
NMI	150	Clinic I	2
NMI	160	Clinical Procedures II	2
NMI	161	Physics and Instrumentation II	2
NMI	170	Clinic II	2
NMI	230	Radiopharmacy	2
NMI	220	Clinic III	2
NMI	240	Clinical Procedures III	4
NMI	260	Clinic IV	4
NMI	250	Clinical Procedures IV	4
NMI	270	Clinic V	4
IMG	230	Sectional Anatomy for Advanced Imaging	3
		Subtotal	**36**
		Total Credits	**71-73**

Nursing

The Associate Degree Nursing program prepares graduates to use their skill and knowledge to fulfill the role of the nurse: enhance human flourishing, demonstrate sound nursing judgment, continually develop professional identity, and possess a spirit of inquiry to improve the quality of patient care. Encompassed within these roles are the core components of context and environment, knowledge and science, personal/professional development, quality and safety, relationship-centered care, and teamwork. These core components are introduced, developed and built upon through the curriculum. Graduates are eligible to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN). The Associate Degree Nursing curriculum is organized around a clearly defined conceptual framework and combines general education and nursing courses. The nursing courses correlate classroom and clinical instruction in a variety of community agencies. *

Acceptance into the Associate Degree Nursing program is based on a selective admissions process. In order to be considered for admission, applicants must comply with college and program admission requirements prior to March 1 for admission to a fall NSG 101 course (July 1 for admission to a spring NSG 101 course).

Progression in the Associate Degree Nursing program is contingent upon achievement of a grade of "C" or better in each biological science, nursing and mathematics course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

CPR requirements must be successfully completed prior to enrolling in the first nursing course and must be kept current throughout the program. Documentation of successful completion of a minimum 75-hour nursing assistant course, or its equivalent, and documentation of computer literacy as defined by KCTCS is required prior to enrolling in the first nursing course.

*Transportation to the community agencies is the responsibility of each student.

Note: The Kentucky Board of Nursing may deny a nursing graduate admission to the NCLEX-RN Exam if an individual has been convicted of a misdemeanor or felony which involves acts that bear directly on the qualifications of the graduate to practice nursing.

The following Associate Degree Nursing programs are accredited by the Accreditation Commission for Education in Nursing 3343 Peachtree Rd. NE, Suite 850, Atlanta, GA 30326, www.acenursing.org, telephone: (404) 975-5000: Ashland Community and Technical College, Bluegrass Community and Technical College, Elizabethtown Community and Technical College, Henderson Community College, Hopkinsville Community College, Jefferson Community and Technical College, Madisonville Community College, Somerset Community College, Southeast Kentucky Community and Technical College, West Kentucky Community and Technical College.

Associate in Applied Science

Nursing - 5138017009

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MYC, OWC, SEC, SMC,WKC)

General Education:

BIO	137	Human Anatomy & Physiology I	4
BIO	139	Human Anatomy & Physiology II	4
BIO	225	Medical Microbiology	4
MAT	150	College Algebra	3
PSY	110	General Psychology	3
PSY	223	Developmental Psychology	3
		Written Communication Courses	6
		Oral Communications Course	3
		Heritage/ Humanities Course	3
		Subtotal	**33**

Nursing Modular Pathway- 513801704

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, HZC, MYC, OWC, SEC, SMC, WKC)

Technical Courses:

NSG	101	***Nursing Practice I	9
NSG	210	***Medical/Surgical Nursing I OR	6
NSG	197	** LPN – ADN Bridge OR	(3)
NSG	199	** Accelerated LPN –ADN Bridge Course	(2)
NSG	211	Maternal Newborn Nursing	3
NSG	212	Behavioral Health Nursing	3
NSG	213	Pediatric Nursing	3
NSG	215	Pharmacology I	1
NSG	220	Medical/Surgical Nursing II	6
NSG	225	Pharmacology II	1
NSG	230	Medical/Surgical Nursing III	6
		Subtotal	**38**
		Total Credits	**71**

**Taken by Licensed Practical Nurses who meet specific program requirements

***Credit may be awarded to Licensed Practical Nurses who meet specific program requirements.

NOTE: CPR requirements must be successfully completed prior to enrolling in the first nursing course and must be kept current throughout the program. Documentation of successful completion of a minimum 75-hour nursing assistant course, or its equivalent, and documentation of computer/digital literacy as defined by KCTCS is required prior to enrolling in the first nursing course.

Nursing Standard Pathway - 513801705

(Offered at JFC)

Technical Courses:

NSG	106	***Nursing One	9
NSG	206	***Nursing Two OR	9
NSG	196	**Nursing LPN Bridge	(5)
NSG	236	(Family Nursing) Nursing Three	9
NSG	246	Nursing Four	9
NSG	216	Nursing Pharmacology I	1
NSG	226	Nursing Pharmacology II	1
		Subtotal	**38**
		Total CREDITS	**71**

**Taken by Licensed Practical Nurses who meet specific program requirements

***Credit may be awarded to Licensed Practical Nurses who meet specific program requirements.

NOTE: CPR (BLS for Healthcare Providers) requirements must be successfully completed prior to enrolling in the first nursing course and must be kept current throughout the program. Documentation of successful completion of a minimum 75-hour nursing assistant course, or its equivalent, a letter of good standing status from the Kentucky Nurse Aide Registry, criminal background checks and documentation of computer/digital literacy as defined by KCTCS are required prior to enrolling in the first nursing course.

Nursing Assistant – Advanced

Provides knowledge and skills for nurse aides to assume the role and responsibility required in a variety of health care settings.

Certificate

Advanced Nursing Assistant - 5139023019

(Offered at BSC, ELC, HPC, MYC, OWC,WKC)

Available Completely Online

NAA	125	Advanced Nursing Assistant OR	6
NAA	100	Nursing Assistant Skills I AND	(3)
NAA	115	Nursing Assistant Skills II OR	(3)
MNA	100	Medicaid Nurse Aide AND	(3)
NAA	115	Nursing Assistant Skills II	(3)
BIO	135	Basic Anatomy and Physiology with Laboratory OR	4
AHS	109	Introduction to Body Structure and Function OR	(4)
BIO	137	Human Anatomy & Physiology IAND	(4)
BIO	139	Human Anatomy & Physiology II	(4)
COM	181	Basic Public Speaking OR	3
COM	252	Introduction to Interpersonal Communication OR	(3)
ENG	101	Writing I OR	(3)
TEC	200	Technical Communications	(3)
		Computer/Digital Literacy	3
		Total Credits	**16-20**

Nursing – Academic/Career Mobility Program

The Academic/Career Mobility Program provides a seamless educational option in nursing with two exit points allowing students to choose a career as an LPN or RN. The program is implemented in a shared framework which prepares graduates to use their skill and knowledge to fulfill the role of the nurse: enhance human flourishing, demonstrate sound nursing judgment, continually develop professional identity, and possess a spirit of inquiry to improve the quality of patient care. Encompassed within these roles are the core components of context and environment, knowledge and science, person/professional development, quality and safety, relationship-centered care, and teamwork. These core components are introduced, developed, and built upon through the curriculum; however, distinct parameters have been established that support the PN and RN scopes of nursing practice. The curriculum is structured around a clearly defined organizing framework and provides the foundation for a competency-based approach to nursing education through the utilization of interactive and student-focused learning strategies. Content and performance-based outcomes for the nursing courses are selected, developed, and leveled from simple to complex. Students who successfully complete the first year will receive a diploma qualifying them to apply for licensure as practical nurses. Following successful completion of the second year, students will receive the Associate in Applied Science Degree in Nursing qualifying them to apply for licensure as registered nurses.

Acceptance into the program is based on a selective admissions process. In order to be considered for admission, applicants must comply with college and program admission requirements. Licensed practical nurses who graduated within one year of admission to the program or have practiced at least one full year within the past three years and hold a current unrestricted license for practical nursing will be admitted to the associate degree level.

Proof of active status on the Kentucky Medicaid Nurse Aide Registry or its equivalent is required prior to enrolling in the first nursing course.

CPR certificate for Health Care Providers/Professional Rescuer must be obtained prior to enrolling in the first nursing course and certification must be kept current throughout the program. Documentation of computer literacy as defined by KCTCS is required prior to enrolling in the first nursing course.

Progression in the nursing program is contingent upon achievement of a grade of "C" or better in each biological science, nursing and mathematics course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

Note: The Kentucky Board of Nursing may deny a nursing graduate admission to the National Council Licensure Examination for Registered Nurses (NCLEX Exam) if an individual has been convicted of a misdemeanor or felony which involves acts that bear directly on the qualifications of the graduate to practice nursing.

Note: Hours Exception (69-72 for the A.A.S.) approved by the KCTCS Board of Regents in June 2010.

Associate in Applied Science

Academic/Career Mobility Program in Nursing - 5138017049

(Offered at SKY)

General Education Courses:

BIO	137	Human Anatomy & Physiology I	4
BIO	139	Human Anatomy & Physiology II	4
BIO	225	Medical Microbiology OR	4
BIO	227	Principles of Microbiology with Laboratory	(5)
MAT	150	College Algebra	3
PSY	110	General Psychology	3
PSY	223	Developmental Psychology	3
		Written Communication Courses	6
		Heritage/Humanities	3
		Oral Communications Course	3
		General Education Total	**33-34**

Technical Courses:

NRS	101	Nursing Care I AND	9
NRS	102	Nursing Care II OR	10
NRS	200	**LPN to ADN Transition	(3)
NRS	203	Nursing Care III	9
NRS	204	Nursing Care IV	10
		Subtotal	**38**
		Total CREDITS	**71-72**

**Taken only by Licensed Practical Nurses who have been admitted to the program and have and have met the pre-requisites.

Note: Documentation of computer/digital literacy as defined by KCTCS is required prior to enrolling in the first nursing course .

Proof of active status on the Kentucky Medicaid Nurse Aide Registry or its equivalent is required prior to enrolling in the first nursing course. CPR certificate for Health Care Providers/Professional Rescuer must be obtained prior to enrolling in the first nursing course and certification must be kept current throughout the program.

Diploma

Academic/Career Mobility Program in Nursing – Practical Nursing - 5139014009

(Offered at SKY)

General Education Courses:

BIO	137	Human Anatomy & Physiology I	4
BIO	139	Human Anatomy & Physiology II	4
ENG	101	Writing I	3
MAT	150	College Algebra	3
PSY	110	General Psychology	3
PSY	223	Developmental Psychology	3
		Oral Communications	3
		General Education Subtotal	23

Technical Courses

NRS	101	Nursing Care I	9
NRS	102	Nursing Care II	10
		Subtotal	**19**
		Total CREDITS	**42**

Note: Documentation of digital literacy as defined by KCTCS is required prior to enrolling in the first nursing course.

Proof of active status on the Kentucky Medicaid Nurse Aide Registry or its equivalent is required prior to enrolling in the first nursing course. CPR certificate for Health Care Providers/Professional Rescuer must be obtained prior to enrolling in the first nursing course and certification must be kept current throughout the program.

Suggested Electives:

NRS	100	Enhancing Nursing Student Success	(3)
AHS	115	Medical Terminology	(3)
NSG	126	Pharmacology in Nursing	(3)

Nursing - Integrated Nursing

The Integrated Nursing Program provides a seamless educational pathway in nursing which allows students to choose multiple career options. The Integrated Nursing Program is designed to deliver nursing education to a cohort group of students with the opportunity to complete the Practical Nursing (PN) or Associate Degree Nursing level. The curriculum is structured around a clearly defined organizing framework and provides the foundation for a competency-based approach to nursing education through the utilization of interactive and student-focused learning strategies. Content and performance-based outcomes for the nursing courses are selected, developed, and leveled from simple to complex. Classroom instruction in theory and basic nursing skills is provided in various delivery methods. Under the guidance of program faculty, students gain valuable experience in the care of patients across the lifespan in a variety of healthcare settings and/or community agencies including hospitals, long-term care facilities, clinics and child care centers.

After two and one-half semesters the student has the option to exit as a PN by enrolling in the PN exit course. This option prepares graduates to function within the legal scope of practice under the supervision of a registered nurse or physician. The practical nursing level focuses on the maintenance of health and prevention of illness, the observation and nursing care of individuals experiencing changes in their health processes, and the evaluation of health practices of patients. Students who choose practical nursing as a career can complete the components in three semesters and are eligible to apply for licensure as a practical nurse. Graduates are eligible to take the National Council Licensure Examination for Practical Nurses (NCLEX-PN).

The Associate Degree Nursing option prepares graduates to provide and manage patient care and to become members within the discipline of nursing. The associate nursing level focuses on the application of a specialized body of knowledge and skills obtained from social and biological sciences in providing evidenced-based, clinically competent care to individuals across the life span. Students choosing the Associate in Applied Science degree in Nursing can complete the components in four semesters and are eligible to apply for licensure as a registered nurse. Graduates are eligible to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN).

Acceptance into the Integrated Nursing Program is based upon a selective admissions process. In order to be considered for admission, applicants must comply with college and program admission requirements. Proof of active status on the Kentucky Medicaid Nurse Aide Registry is required prior to enrolling in the first integrated nursing course. Licensed practical nurses may receive credit for the first and second semesters of nursing courses based upon specific college offerings, work experience, and active Kentucky or compact state licensure status.

Progression within the Integrated Nursing Program is contingent upon achievement of a grade of "C" or better in all program course requirements and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

If more than three years have elapsed since initial enrollment in any nursing program, an applicant must repeat all nursing courses.

A nursing graduate with a misdemeanor or felony conviction may be denied permission to access the NCLEX by the Kentucky Board of Nursing.

The Madisonville Community College Associate Degree Nursing program is currently accredited by:

Accreditation Commission for Education in Nursing, Inc., 3343 Peachtree Road NE, Suite 850, Atlanta, Georgia 30326, www.acenursing.org, www.nlac.org. Telephone (404) 975-5000.

Note: Hours Exception (69-72 for the A.A.S.) approved by the KCTCS Board of Regents in June 2010.

Associate in Applied Science

Nursing - 5138017069

(Offered at MDC)

General Education:

BIO	135	Basic Anatomy and Physiology with Laboratory*	4
PSY	110	General Psychology	3
COM	181	Basic Public Speaking	3
ENG	101	Writing I	3
ENG	102	Writing II	3
MAT	150	College Algebra	3
		Heritage/Humanities	3
		Subtotal	**22**

Technical or Support Courses:

CIT	105	Introduction to Computers OR	
OST	105	Introduction to Information Systems OR	
		demonstrated competency	0-3
NIP	102	Introduction of Pharmacology	3
NIP	116	Fundamentals of Nursing	10
AHS	100	Human Growth and Development**	2
NIP	120	Maternal Child Nursing Care	3
NIP	128	Medical Surgical Alteration	10
NIP	212	Advanced Medical Surgical Nursing	10
NIP	215	Leadership and Specialty Practice	7
		Subtotal	**45-48**
		Total Credits	**67-70**

NOTE: CPR requirements must be successfully completed prior to enrolling in the first nursing course and must be kept current throughout

the program. Documentation of successful completion of a minimum 75-hour nursing assistant course, or its equivalent, is required prior to enrolling in the first nursing course.

*BIO 137 and BIO 139 may be substituted for BIO 135.

**PSY 223 may be substituted for AHS 100.

Diploma

Practical Nursing - 5139014049

(Offered at MDC)

General Education:

BIO	135	Basic Anatomy and Physiology with Laboratory*	4
PSY	110	General Psychology	3
COM	181	Basic Public Speaking	3
ENG	101	Writing I	3
		Subtotal	**13**

Technical or Support Courses:

CIT	105	Introduction to Computers OR	
OST	105	Introduction to Information Systems OR	
		Demonstrated competency	0-3
NIP	102	Introduction of Pharmacology	3
NIP	116	Fundamentals of Nursing	10
AHS	100	Human Growth and Development**	2
NIP	120	Maternal Child Nursing Care	3
NIP	128	Medical Surgical Alteration	10
NIP	140	Practical Nursing Role Transition	6
		Subtotal	**34-37**
		Total Credits	**47-50**

Note: CPR requirements must be successfully completed prior to enrolling in the first nursing course and must be kept current throughout the program. Documentation of successful completion of a minimum 75-hour nursing assistant course, or its equivalent, is required prior to enrolling in the first nursing course.

*BIO 137 and BIO 139 may be substituted for BIO 135.

**PSY 223 may be substituted for AHS 100.

Certificates

Medicaid Nurse Aide – 5139012020

MNA	100	Medicaid Nurse Aide OR	3
NAA	100	Nursing Assistant Skills I OR	(3)
NAA	125	Advanced Nursing Assistant OR	(6)
HST	104	Health Care Basic Skills I with Clinical	(3.5)
		Total Credits	**3-6**

NOTE: Madisonville Community College does not offer NAA 125

Kentucky Medication Aide - 5139012030

NOTE: After the student completes the first semester of the Integrated Nursing program, the student is eligible to sit for the KMA exam.

AHA Advanced Cardiac Life Support – 5139012050

(Offered at MDC)

NIP	220	Advanced Cardiac & Emergent Care	2
		Total Credits	2

Nursing - Practical Nursing

The Practical Nursing program prepares individuals to practice within the legal scope of practical nursing under the supervision of a registered nurse or physician. Use of the nursing process at the practical nursing level toward the maintenance of health and prevention of illness, the observation and nursing care of persons experiencing changes in their health processes, and the evaluation of health practices of patients are emphasized.

Classroom instruction in theory and basic nursing skills is provided on campus. Under the guidance of program faculty, students gain valuable experience in the care of all ages in a variety of health care settings and/or community agencies - hospitals, long-term care facilities, clinics and child care centers. (Transportation to the community agencies is the responsibility of each student.)

Acceptance in the Practical Nursing program is based on a selective admission process.

Progression in the Practical Nursing program is contingent upon achievement of a grade of "C" or better in each course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

CPR requirements must be successfully completed prior to enrolling in the first nursing course and must be kept current throughout the program. Documentation of active status on the Medicaid Nurse Aide Registry or successful completion of an equivalent course within the pre-

vious three years is required prior to enrolling in the first nursing course. Documentation of computer literacy as defined by KCTCS is required prior to enrolling in the first nursing course.

Note: The Kentucky Board of Nursing (KBN) may deny a nursing graduate admission to the NCLEX-PN Exam if an individual has been convicted of a misdemeanor or felony that involves acts that bear directly on the qualifications of the graduate to practice nursing.

Diploma

Practical Nurse - 5139014039

(Offered at ASC, BLC, BSC, GTW, HPC, HZC, JFC, MYC, SKY, SMC,WKC)

Practical Nurse Pathway 1 – Traditional - 513901401

(Offered at BLC, GTW, HZC, JFC, SKY, SMC)

General Education:

Area 1 =

TEC	200	Technical Communications OR	3
ENG	101	Writing I OR	(3)
COM	181	Basic Public Speaking OR	(3)
COM	252	Introduction to Interpersonal Communication	(3)

Area 2 =

BIO	135	Basic Anatomy & Physiology with Laboratory OR	4
BIO	137	Human Anatomy & Physiology I AND	(4)
BIO	139	Human Anatomy & Physiology II	(4)
		Subtotal	**7-11**

Technical Core:

AHS	100	Human Growth & Development OR	2
PSY	110	General Psychology AND	(3)
PSY	223	Developmental Psychology	(3)
NPN	100	Introduction to Nursing & Health Care System AND	2
NPN	105	Development of Care Giver Role AND	6
NPN	110	Pharmacology I OR	2
NPN	115	*Practical Nursing Bridge Course	(6)
NPN	125	Mental Health	3
NPN	130	Pharmacology II	3
NPN	135	Introduction to Health Deviations	6
NPN	200	Med Surg I	5
NPN	201	Child Bearing Family	3
NPN	205	Med Surg II	5
NPN	210	Clinical Practicum	4
NPN	215	Nursing Trends & Issues	1
		Subtotal	**38-46**
		Total Credits	**45–57**

*Taken by advanced nursing assistant and allied health graduates.

Practical Nurse – Pathway 2 – Traditional Modified - 513901402

(Offered at ASC, BSC, HPC, MYC,WKC)

General Education:

Area 1 =

TEC	200	Technical Communications OR	3
ENG	101	Writing I OR	(3)
COM	181	Basic Public Speaking OR	(3)
COM	252	Introduction to Interpersonal Communication	(3)

Area 2 =

BIO	135	Basic Anatomy & Physiology with Laboratory OR	4
BIO	137	Human Anatomy & Physiology I AND	(4)
BIO	139	Human Anatomy & Physiology II	(4)
		Subtotal	**7-11**

Technical Core:

AHS	100	Human Growth & Development OR	2
PSY	110	General Psychology AND	(3)
PSY	223	Developmental Psychology	(3)
AHS	120	Medical Terminology OR	1
AHS	115	Medical Terminology OR	(3)
CLA	131	Medical Terminology from Greek and Latin OR	(3)
MIT	103	Medical Office Terminology	(3)
NPN	101	Nursing Fundamentals AND	6
NPN	111	Pharmacology OR	3
NPN	115	*Practical Nursing Bridge Course	(6)
NPN	125	Mental Health	3
NPN	135	Introduction to Health Deviations	6
NPN	201	Child Bearing Family	3
NPN	202	Med-Surg I Alterations	6
NPN	206	Med-Surg II Alterations	6
NPN	210	Clinical Practicum	4
NPN	215	Nursing Trends & Issues	1
		Subtotal	**38-47**
		Total Credits	**45-58**

Recommended Electives:

FHM	100	Dosage Calculations	(2)
MAT	110	Applied Math	(3)
AHS	105	Introductions to Health Occupations	(3)
AHS	130	Infection Control	(2)
NSG	299	Selected Topics in Nursing: (Topic)	(1-4)

*Taken by advanced nursing assistant and allied health graduates.

Practical Nurse – Pathway 3 – Modular - 513901403

General Education:

Area 1 =

ENG	101	Writing I	3

Area 2 =

BIO	137	Human Anatomy & Physiology I	4
BIO	139	Human Anatomy & Physiology II	4
MAT	110	Applied Mathematics	3
PSY	110	General Psychology	3
		Subtotal	**17**

Technical Core:

PSY	223	Developmental Psychology	3
AHS	115	Medical Terminology OR	3
CLA	131	Medical Terminology from Greek and Latin	(3)
NPN	106	Fundamentals of Nursing Care	6
NPN	108	Pharmacology in Nursing	3
NPN	125	Mental Health	3
NPN	140	Nursing Care I	3
NPN	201	Child Bearing Family	3
NPN	208	Nursing Care II	10
NPN	210	Clinical Practicum	4
NPN	215	Nursing Trends & Issues	1
		Subtotal	**39**
		Total Credits	**56**

Certificates

Medicaid Nurse Aide - 5139012020

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

Available Completely Online

MNA	100	Medicaid Nurse Aide OR	3
NAA	100	Nursing Assistant Skills I OR	(3)
NAA	125	Advanced Nursing Assistant OR	(6)
HST	104	Health Care Basic Skills I with Clinical	(3.5)
		Total Credits	**3-6**

Kentucky Medication Aide - 5139012030

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

KMA	100	Kentucky Medication Aide	5
		Total Credits	**5**

Occupational Therapy Assistant

The Occupational Therapy Assistant Program is designed to provide a quality educational experience that will train prospective professionals in the art and science of promoting and maintaining the holistic health and wellness of people, organizations, and populations through engagement in occupation. Graduates will be able to perform/engage as entry level professionals under the supervision of an Occupational Therapist (OT). Graduates will develop skills necessary for employment as Certified Occupational Therapy Assistants, thereby meeting the students' individual needs and the expressed health-care needs of the local and extended communities served by the Colleges. The program strives to fill a growing need for professionals able to contribute to all facets of occupational therapy, from community-based programs to client-centered intervention. The program promotes the value and professional importance of life-long learning.

A basic background in natural sciences, mathematics, communication, and behavioral sciences undergirds the specialized course work. Specialized course work prepares students for the certification examination they will take to become Certified Occupational Therapy Assistants (COTA). Employment may be in hospitals, rehabilitation facilities, nursing homes, clinics, and other health care facilities, as well as within pediatric, community, or educational settings.

Acceptance in to the OTA program is based on a selective admission process. In order to be considered for admission, applicants must comply with college and program admissions requirements. Students enrolled in the OTA program must achieve a minimum grade of a "C" in each OTA course and prerequisite courses.

CPR requirement must be successfully completed prior to enrolling in the first semester of OTA program. The CPR course must be Professional or Healthcare Provider.

Background check and drug screen prior to admission is required by all students, and students with a misdemeanor or felony conviction may be denied permission to access fieldwork sites.

Students will be responsible for their own transportation for fieldwork.

Documentation of computer literacy as defined by KCTCS is required prior to enrolling in the first OTA course.

All prerequisite courses must be complete before a student is admitted in the OTA program.

The Occupational Therapy Assistant Program is accredited by the Accreditation Council on Occupational Therapy Education (ACOTE), of the American Occupational Therapy Association (AOTA), 4720 Montgomery Lane, Suite 200 Bethesda, MD 20814-3449 Phone number: (301) 652-(AOTA). www.acoteonline.org

Graduates of the program will be able to sit for the national certification examination for the occupational therapy assistant administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be a Certified Occupational Therapy Assistant (COTA). Most states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT Certification Examination.

Note: An OTA graduate with a misdemeanor or felony conviction may be denied permission to access the NBCOT certification exam. The student is responsible for contacting NBCOT prior to admission.

Associate in Applied Science

Occupational Therapy Assistant - 5108037009

(Offered at JFC, MDC)

General Education Core:

ENG	101	Writing I	3
PSY	110	General Psychology	3
PSY	223	Developmental Psychology	3
COM	181	Basic Public Speaking OR	3
COM	252	Introduction to Interpersonal Communication	(3)
		Heritage/Humanities*	3
		Total	**15**

*MCC recommends REL 130 to fulfill the Heritage/Humanities requirement.

Pathway # 1 - 510803701

(Offered at MDC)

Additional General Education (MCC Only):

BIO	137	Human Anatomy and Physiology I	4
BIO	139	Human Anatomy and Physiology II	4
MAT	110	Applied Mathematics OR	3
MAT	150	College Algebra	(3)
		Subtotal Credits (MCC Only)	**26**

Technical Core :

OTA	101	Introduction to Occupational Therapy	3
OTA	126	Level IA Fieldwork	1
OTA	146	Occupational Therapy in Mental Health	3
OTA	136	Physical Dysfunction	4
OTA	226	Level IB Fieldwork	1
OTA	246	Pediatric Issues in Occupation Therapy	3
OTA	256	Elder Issues in Occupational Therapy	2
OTA	206	Community Practice	2
OTA	236	Professional Transitions and Management	2
OTA	267	Level IIA Fieldwork	5
OTA	277	Level IIB Fieldwork	5
		Subtotal	**31**

Additional Technical Courses (MCC only):

OTA	113	Applied Anatomy and Kinesiology	2
OTA	115	Skills and Interventions I	2
OTA	125	Assistive Technology and Documentation	2
OTA	225	Skills and Interventions II	2
OTA	286	Clinical Seminar	2
		Total Additional Technical Credits	**10**
		Alternate Pathway #1 for MCC/Total Credits	**67**

Pathway #2 - 510803702

(Offered at JFC)

General Education Core:

ENG	101	Writing I	3
PSY	110	General Psychology	3
PSY	223	Developmental Psychology	3
COM	181	Basic Public Speaking OR	3
COM	252	Introduction to Interpersonal Communication	(3)
		Heritage/Humanities	3
		Total	**15**

Additional General Education (JCTC Only):

BIO	137	Human Anatomy and Physiology I	4
BIO	139	Human Anatomy and Physiology II	4
MAT	110	Applied Mathematics OR	3
MAT	150	College Algebra	(3)
SOC	101	Introduction to Sociology	3
ENG	102	Writing II	3
		Subtotal	**17**

Technical Core:

OTA	101	Introduction to Occupational Therapy	3
OTA	126	Level IA Fieldwork	1
OTA	146	Occupational Therapy in Mental Health	3
OTA	136	Physical Dysfunction	4
OTA	226	Level IB Fieldwork	1
OTA	246	Pediatric Issues in Occupation Therapy	3
OTA	256	Elder Issues in Occupational Therapy	2
OTA	206	Community Practice	2
OTA	236	Professional Transitions and Management	2
OTA	267	Level IIA Fieldwork	5
OTA	277	Level IIB Fieldwork	5
		Subtotal	**31**

Additional Technical Courses (JCTC only):

OTA	116	Media Principles & Procedures I	2
OTA	216	Media Principles & Procedures II	2

Recommended Additional Technical Courses (JFC only):

OTA	286	Clinical Seminar	(2)
		Total Additional Technical Credit	**4**
		Alternate Pathway for JCTC/Total Credits	**67**

Paralegal Technology

The Paralegal Technology curriculum is designed to prepare a person for entry-level employment as a paralegal in courts, corporations, law firms, and government agencies. Paralegal Technology is a program of study that requires courses in the technical area. In addition, the Associate in Applied Science degree also requires general education courses.

The curriculum is based on standards developed from the National Association of Legal Assistants' Descriptions of Certified Legal Assistant (CLA) Exam Sections. Additional research data used in the development of publication was collected from a review of related literature.

Industry standards are based on the National Association of Legal Assistants' Descriptions of Certified Legal Assistant (CLA) Exam Sections.

The successful completion of the Paralegal Technology Program should provide the student the opportunity for employment as a paralegal in private law firms, courts, trust departments of banks, corporations, and government agencies.

Progression in the Paralegal Technology program is contingent upon achievement of a grade of "C" or better in each paralegal technical course.

The Associate in Applied Science degree received upon completion of this concentration is not designed for transfer to a senior college or university. It is designed for immediate employment preparation.

+Students should contact the senior college or university of their choosing to determine what, if any, courses will be accepted as transfer credits.

Associate in Applied Science

Paralegal Technology - 2203027019

(Offered at MDC)

ENG	101	Writing I	3
		Quantitative Reasoning	3
		Natural Sciences	3
		Social/Behavioral Sciences*	3
		Heritage/Humanities	3
POL	101	American Government	3
COM	181	Basic Public Speaking	3
		Subtotal	**21**

Technical Support Courses:

		Computer/Digital Literacy Course	3
CIT	130	Productivity Software	3
		Criminal Justice Elective Course**	3
		Subtotal	**9**

Technical Courses:

PGL	111	Legal Systems and Terminology	3
PGL	112	Legal Research	3
PGL	113	Law Office Management	3
PGL	211	Family Law	3
PGL	212	Legal Writing	3
PGL	221	Wills and Estates	3
PGL	213	Civil Litigation I	3
PGL	214	Real Property I	3
PGL	223	Civil Litigation II	3
PGL	224	Real Property II	3
PGL	231	Torts	3
PGL	233	Ethics	3
		Subtotal	**36**
		Total	**66**

*PSY 110 (General Psychology) OR SOC 101 (Introduction to Sociology) recommended.

**CRJ 100 (Introduction to Criminal Justice) OR CRJ 216 (Criminal Law) recommended.

Certificate

Paralegal Technology – 2203023019

(Offered at MDC)

ENG	101	Writing I	3
		Computer/Digital Literacy Course	3
CIT	130	Productivity Software	3
PGL	111	Legal Systems and Terminology	3
PGL	112	Legal Research	3
PGL	211	Family Law	3
PGL	212	Legal Writing	3
PGL	213	Civil Litigation I	3
PGL	221	Wills and Estates	3
PGL	214	Real Property I	3
PGL	223	Civil Litigation II	3
PGL	224	Real Property II	3
PGL	231	Torts	3
		Total	**39**

Pharmacy Technology

The pharmacy technician performs technical functions under the direction of a Registered Pharmacist; including prescription preparation, inventory, repackaging, and compounding. The essential elements of this program include the history of pharmacy, pharmacy law, medical terminology, drug classification and prescription preparation. Laboratory experience and an externship under the supervision of a licensed pharmacist are required components of the program.

Progression in the Pharmacy Technician program is contingent upon achievement of a grade of "C" or above in each required course and maintenance of a 2.0 cumulative grade-point average or above (on a 4.0 scale).

Diploma

Pharmacy Technician II - 5108054029

(Offered at ASC, BLC, HPC, JFC, SMC)

General Education:

Area 1 =

COM	181	Basic Public Speaking OR	3
COM	252	Introduction to Interpersonal Communication	(3)

Area 2 =

BIO	130	Aspects of Human Biology OR	3
BIO	135	Basic Anatomy and Physiology with Laboratory OR	(4)
BIO	137	Human Anatomy & Physiology I AND	(4)
BIO	139	Human Anatomy & Physiology II	(4)
		Subtotal	**6-11**
		Digital Literacy	0-3
EFM	100	Personal Financial Management OR	3
BAS	120	Personal Finance OR	(3)
WPP	200	Workplace Principles	(3)
AHS	115	Medical Terminology OR	3
CLA	131	Medical Terminology from Greek and Latin OR	(3)
MIT	103	Medical Office Terminology	(3)
PHA	110	Pharmacy Procedures and Skills	6
PHA	125	Pharmaceutical Calculations	2
PHA	136	Pharmacology	3
PHA	200	Admixtures for IV Therapy	3
PHA	205	Admixture Preparations	1
PHA	210	Drug Classifications	6
PHA	250	Pharmacy Experience	1-8
		Subtotal	**28-38**
		Total Credits	**34-49**

Additional Suggested Courses (Not Required):

AHS 100 – Human Growth and Development (2)
AHS 130 – Infection Control (2)
AHS 201 – Management Principles for Allied Health Providers (3)
AHS 203 – Diversity in Health Care (3)
BAS 160 – Introduction to Business (3)
KHP 190 – First Aid and Emergency Care (2)

Certificates

Pharmacy Technician I - 5108053029

(Offered at ASC, HPC, JFC, OWC, SMC,WKC)

COM	181	Basic Public Speaking OR	3
COM	252	Introduction to Interpersonal Communication OR	(3)
COM	101	Introduction to Communications*	(3)
AHS	115	Medical Terminology OR	3
CLA	131	Medical Terminology from Greek and Latin OR	(3)
MIT	103	Medical Office Terminology	(3)
PHA	110	Pharmacy Procedures and Skills	6
PHA	125	Pharmaceutical Calculations	2
PHA	136	Pharmacology	3
PHA	104	Parenterals**	2
PHA	250	Pharmacy Experience	2
		Digital Literacy	0-3
		Total Credits	**21-24**

Retail Pharmacy Technician - 5108053039

(Offered at ASC, HPC, JFC, SMC)

COM	181	Basic Public Speaking OR	3
COM	252	Introduction to Interpersonal Communication OR	(3)
COM	101	Introduction to Communications*	(3)
AHS	115	Medical Terminology OR	3
CLA	131	Medical Terminology from Greek and Latin OR	(3)
MIT	103	Medical Office Terminology	(3)
PHA	110	Pharmacy Procedures and Skills	6
PHA	125	Pharmaceutical Calculations	2
PHA	136	Pharmacology	3
		Digital Literacy	0-3
		Total Credits	**17-20**

*COM 101 may be used in certificates. If taken in the diploma, an additional three (3) credits will be needed to meet Area 1 requirements.

**PHA 200 and PHA 205 may substitute for PHA 104 but PHA 104 will not substitute for PHA 200 and PHA 205.

Physical Therapist Assistant

This program prepares the individual to become a physical therapist assistant (PTA) who is able to perform selected components of intervention and data collection under the direction and supervision of a physical therapist. The program is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE*).

The curriculum combines general education and physical therapy courses. Various facilities are utilized for clinical experiences. The graduate is eligible to sit for the national licensing examination for the physical therapist assistant. Enrollment in this program is limited; therefore, a selective admissions process is followed.

Students enrolled in the Physical Therapist Assistant program must achieve a minimum grade of "C" in each required general education course; a minimum grade of "C" in each required PTA didactic course; and a grade of pass in each clinical practicum course to complete the program.

CPR requirements must be attained by completing a program-approved CPR course prior to enrolling in the first physical therapist assistant course and must be kept current throughout the program.

*The Physical Therapist Assistant programs at Hazard Community and Technical College / Southeast Kentucky Community and Technical College, Jefferson Community and Technical College, Madisonville Community College, Somerset Community College, and West Kentucky Community and Technical College are accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE) 1111 North Fairfax Street, Alexandria VA, 22314; telephone: 703-706-3245; e-mail: accreditation@apta.org; website: www.capteonline.org.

Associate in Applied Science

Physical Therapist Assistant - 5108067049

(Offered at BSC, HZC, JFC, MDC, SEC, SMC,WKC)

Pathway 1 - 510806703

(Offered at BSC, HZC, JFC, SEC, SMC,WKC)

General Education:

ENG	101	Writing I	3
BIO	137	Human Anatomy and Physiology I	4
BIO	139	Human Anatomy and Physiology II	4
		Heritage/Humanities	3
PSY	110	General Psychology	3
PSY	223	Developmental Psychology	3
MAT	150	College Algebra	3
		Oral Communications	3
		Subtotal	**26**

Technical Courses:

		Digital Literacy	0-3
PTA	101	Orientation to Physical Therapy Practice	5
PTA	125	Neuroanatomy for the PTA	1
PTA	150	Functional Anatomy and Kinesiology	6
PTA	160	Medical and Surgical Conditions in Physical Therapy	3
PTA	170	Clinical Practicum I	1
PTA	200	Modalities and Procedures in Physical Therapy	5
PTA	220	Physical Therapy Principles and Procedures	5
PTA	240	Clinical Practicum II	2
PTA	250	Neurological Rehabilitation in Physical Therapy	5
PTA	260	Seminar in Physical Therapy	2
PTA	280	Clinical Practicum III	5
		Subtotal	**40-43**
		TOTAL	**66-69**

Pathway 2 - 510806704

(Offered at MDC)

General Education:

ENG	101	Writing I	3
BIO	137	Human Anatomy and Physiology I	4
BIO	139	Human Anatomy and Physiology II	4
		Heritage/Humanities	3
PSY	110	General Psychology	3
PSY	223	Developmental Psychology	3
MAT	150	College Algebra	3
COM	181	Basic Public Speaking	3
		Subtotal	**26**

Technical Support Courses:

AHS	105	Introduction to Allied Health Occupations	3
		Subtotal	**3**

Technical Courses:

		Digital Literacy	0-3
PTA	1501	Functional Anatomy & Kinesiology Lab	3
PTA	1502	Functional Anatomy & Kinesiology Lecture	3
PTA	120	Basic Skills for the PTA	2
PTA	121	Basic Skills for the PTA Lab	2
PTA	170	Clinical Practicum I	1
PTA	222	Pathology & Rehabilitation of Orthopedic Conditions	2
PTA	223	Pathology & Rehabilitation of Orthopedic Conditions Lab	2
PTA	234	Pathology & Rehabilitation of Neurological & Pediatric Conditions	2
PTA	233	Pathology & Rehabilitation of Neurological & Pediatric Conditions Lab	2
PTA	202	Therapeutic Modalities in Physical Therapy	2
PTA	203	Therapeutic Modalities in Physical Therapy Lab	2
PTA	240	Clinical Practicum II	2
PTA	256	Pathology & Rehabilitation of Special Populations & Conditions	2
PTA	255	Pathology & Rehabilitation of Special Populations & Conditions Lab	1
PTA	260	Seminar in Physical Therapy	2
PTA	280	Clinical Practicum III	5
		Subtotal	**35-38**
		Total Credits (Pathway 2)	**64-67**

Plastics Processing

The Plastics Processing certificate will prepare students for an entry-level position in plastics processing companies.

Certificate

Plastics Processing - 1506073049

(Offered at MYC)

ITE	233	Statistical Process Control	3
ELT	107	Computer Applications for Technicians	4
ISX	101	Introduction to Industrial Safety	3
PL	101	Plastic Processes and Materials	4
PL	151	Polymer Science & Testing	4
PL	251	Injection Molding OR	4
PL	261	Plastics Extrusion	(4)
		Total Credits	**22**

Plumbing Technology

Installing water supply and waste disposal systems in residential, commercial, and highly complex industrial sites is the focus of the plumbing program. In addition to practical experiences, instruction is given in laws and codes, blueprint reading, drawing, special equipment and other related areas.

Progression in the Plumbing technology program is contingent upon achievement of a grade of "C" or better in each PLB and BRX course and maintenance of a 2.0 cumulative grade point average or better (on a 4.0 scale).

Associate in Applied Science

Plumbing Technology - 4605037019

(Offered at ELC)

General Education:

ENG	101	Writing I	3
		Quantitative Reasoning	3
		Social/Behavioral Sciences	3
		Heritage/Humanities	3
		Natural Sciences	3
		Oral Communications	3
		Subtotal	**18**

Technical Courses:

		Computer/Digital Literacy	3
PLB	150	Plumbing, Introduction to the Trade AND	3
PLB	151	Basic Plumbing Skills OR	3
PLB	100	Basic Theory of Plumbing AND	(3)
PLB	105	Plumbing Principles	(3)
PLB	160	Plumbing Systems, DWV & Water	3
PLB	161	Rough-In of Plumbing Fixtures	2
PLB	250	Plumbing Appliances & Fixtures	3
PLB	251	Pumps & Water Heaters	2
PLB	260	Service AND	2

PLB	261	Advanced Plumbing Lab OR	2
PLB	265	Valve & Faucet Repairs AND	(1)
PLB	267	Water Heater Service & Replacement AND	(1)
PLB	269	Sewer & Drain Cleaning	(1)
PLB	262	Back Flow Prevention	3
PLB	270	License Preparation for Journeyman Exam	3
PLB	298	Plumbing Practicum/Repairs & Maintenance OR	4
PLB	299	Plumbing Cooperative Education	(4)
BRX	220	Blueprint Reading for Construction	3
BAS	120	Personal Finance OR	3
EFM	100	Personal Financial Management	(3)
WPP	200	Workplace Principles OR	3
BAS	250	Business Employability Seminar	(1)
ISX	101	Introduction to Industrial Safety OR	3
ISX	100	Industrial Safety	(3)
		Subtotal	**42-45**
		Total	**60-63**

Diploma

Plumber Mechanic - 4605034019

(Offered at ELC, JFC, MYC)

General Education:

Area 1 =		Written Communication, Oral Communications, or Heritage/Humanities	3
Area 2 =		Quantitative Reasoning	3
		Subtotal	**6**

Technical Courses:

		Computer/Digital Literacy course or demonstrated competency	0-3
PLB	150	Plumbing, Introduction to the Trade AND	3
PLB	151	Basic Plumbing Skills OR	3
PLB	100	Basic Theory of Plumbing AND	(3)
PLB	105	Plumbing Principles	(3)
PLB	160	Plumbing Systems, DWV & Water	3
PLB	161	Rough-In of Plumbing Fixtures	2
PLB	250	Plumbing Appliances & Fixtures	3
PLB	251	Pumps & Water Heaters	2
PLB	260	Service AND	2
PLB	261	Advanced Plumbing Lab OR	2
PLB	265	Valve & Faucet Repairs AND	(1)
PLB	267	Water Heater Service & Replacement AND	(1)
PLB	269	Sewer & Drain Cleaning	(1)
PLB	262	Back Flow Prevention	3
PLB	270	License Preparation for Journeyman Exam OR	3
PLB	298	Plumbing Practicum/Repairs & Maintenance OR	4
PLB	299	Plumbing Cooperative Education	(4)
BRX	220	Blueprint Reading for Construction	3
EFM	100	Personal Financial Management OR	3
BAS	120	Personal Finance	(3)
WPP	200	Workplace Principles OR	3
BAS	250	Business Employability Seminar	(1)
ISX	101	Introduction to Industrial Safety OR	3
ISX	100	Industrial Safety	(3)
		Subtotal	**39-45**
		Total	**45 - 51**

Certificates

Certified Backflow Tester* - 4605033079

(Offered at BSC, ELC, JFC, MYC)

PLB	262	Backflow Prevention	3
		Total	**3**

*Requires that the graduate pass a written test with 80% accuracy and a 3-part performance test

Finish Plumber - 4605033069

(Offered at BSC, ELC, JFC, MYC)

PLB	150	Plumbing, Introduction to the Trade AND	3
PLB	151	Basic Plumbing Skills OR	3
PLB	100	Basic Theory of Plumbing AND	(3)
PLB	105	Plumbing Principles	(3)
PLB	250	Plumbing Appliances & Fixtures	3
PLB	251	Pumps & Water Heaters	2
		Electives (Technical Core)	6
		Total	**17**

Maintenance Plumber - 4605033049

(Offered at BSC, ELC, JFC, MYC)

PLB	150	Plumbing, Introduction to the Trade AND	3
PLB	151	Basic Plumbing Skills OR	3
PLB	100	Basic Theory of Plumbing AND	(3)
PLB	105	Plumbing Principles	(3)
PLB	115	Plumbing Applications	4
ISX	101	Introduction to Industrial Safety OR	3
ISX	100	Industrial Safety	(3)
		Total	**13**

1st Year Plumber Mechanic - 4605033109

(Offered at ELC, JFC, MYC)

PLB	150	Plumbing, Introduction to the Trade AND	3
PLB	151	Basic Plumbing Skills OR	3
PLB	100	Basic Theory of Plumbing AND	(3)
PLB	105	Plumbing Principles	(3)
PLB	160	Plumbing Systems, DWV & Water	3
PLB	161	Rough-In of Plumbing Fixtures	2
PLB	250	Plumbing Appliances & Fixtures	3
PLB	251	Pumps & Water Heaters	2
		Total	**16**

2nd Year Plumber Mechanic* - 4605033119

(Offered at ELC, JFC, MYC)

PLB	150	Plumbing, Introduction to the Trade AND	3
PLB	151	Basic Plumbing Skills OR	3
PLB	100	Basic Theory of Plumbing AND	(3)
PLB	105	Plumbing Principles	(3)
PLB	160	Plumbing Systems, DWV & Water	3
PLB	161	Rough-In of Plumbing Fixtures	2
PLB	250	Plumbing Appliances & Fixtures	3
PLB	251	Pumps & Water Heaters	2
PLB	262	Backflow Prevention	3
PLB	260	Service AND	2
PLB	261	Advanced Plumbing Lab AND	2
PLB	270	License Preparation for Journeyman Exam OR	3
PLB	260	Service AND	(2)
PLB	265	Valve & Faucet Repairs AND	(1)
PLB	267	Water Heater Service & Replacement AND	(1)
PLB	269	Sewer & Drain Cleaning	(1)
		Total	**24-26**

*Requires that the graduate pass a written test with 80% accuracy and a 3-part performance test

Plumber Estimator - 4605033099

(Offered at BSC, ELC, JFC, MYC)

PLB	150	Plumbing, Introduction to the Trade AND	3
PLB	151	Basic Plumbing Skills OR	3
PLB	100	Basic Theory of Plumbing AND	(3)
PLB	105	Plumbing Principles	(3)
PLB	160	Plumbing Systems, DWV & Water AND	3
PLB	161	Rough-In of Plumbing Fixtures OR	2
PLB	250	Plumbing Appliances & Fixtures AND	(3)
PLB	251	Pumps & Water Heaters	(2)
PLB	261	Advanced Plumbing Lab OR	2
PLB	265	Valve & Faucet Repairs AND	(1)
PLB	267	Water Heater Service & Replacement AND	(1)
PLB	269	Sewer & Drain Cleaning	(1)
PLB	270	License Preparation for Journeyman Exam	3
BRX	220	Blueprint Reading for Construction	3
WPP	200	Workplace Principles OR	3
BAS	250	Business Employability Seminar	(1)
		Mathematics	3
		Computer/Digital Literacy	0-3
		Total	**23-29**

Plumber's Helper - 4605033129

(Offered at ELC, GTW, JFC, MYC)

PLB	150	Plumbing, Introduction to the Trade AND	3
PLB	151	Basic Plumbing Skills OR	3
PLB	100	Basic Theory of Plumbing AND	(3)
PLB	105	Plumbing Principles	(3)
		Elective (Technical Core)	3
		Total	**9**

Rough Plumber - 4605033059

(Offered at ELC, JFC, MYC)

PLB	150	Plumbing, Introduction to the Trade AND	3
PLB	151	Basic Plumbing Skills OR	3
PLB	100	Basic Theory of Plumbing AND	(3)
PLB	105	Plumbing Principles	(3)
PLB	160	Plumbing Systems, DWV & Water	3
PLB	161	Rough-In of Plumbing Fixtures	2
		Electives (Technical Core)	6
		Total	**17**

Service & Repair Plumber - 4605033089

(Offered at ELC, JFC, MYC)

PLB	150	Plumbing, Introduction to the Trade AND	3
PLB	151	Basic Plumbing Skills OR	3
PLB	100	Basic Theory of Plumbing AND	(3)
PLB	105	Plumbing Principles	(3)
PLB	160	Plumbing Systems, DWV & Water	3
PLB	161	Rough-In of Plumbing Fixtures	2
PLB	250	Plumbing Appliances & Fixtures	3
PLB	251	Pumps & Water Heaters	2
PLB	260	Service & Code Review	2
PLB	261	Advanced Plumbing OR	2
PLB	265	Valve & Faucet Repairs AND	(1)
PLB	267	Water Heater Service & Replacement AND	(1)
PLB	269	Sewer & Drain Cleaning	(1)
		Total	**20-21**

Professional Craft: Pottery

This program is designed to prepare individuals for employment as professional potters or in pottery-related fields. The curriculum introduces both traditional and contemporary concepts of pottery. The program provides training in technical skills, design skills, and marketing and business essentials. Course work includes development of basic and advanced throwing skills with emphasis on form and design. Study will include pottery studio design and marketing procedures for the professional potter. Graduates will be able to open and operate their own pottery, work for existing pottery businesses, or transfer to a four-year degree program. Upon completion, graduates will receive an Associate in Applied Science degree.

Kiln Building for Professional Potters Certificate:

Includes instruction in the methods of kiln construction, the principles used in designing kilns, and instruction in how to prepare layouts for building kilns. Topics include safety, historical and perspective, materials, design, type, fuels, and firing process. The program will also provide students with hands on experience in the building of kilns for use by professional potters. Students will participate in the building of two different types of kilns using two different types of fuels. Upon successful completion of the program, students will be able to supervise the construction of kilns for use by professional potters.

Professional Raku Pottery Certificate:

Provides students with advanced instruction in the techniques of producing and firing raku pottery. The program provides instruction in advanced shapes and decoration; constructing, loading, and firing a personal raku kiln; and the creation of a body of work for a one-person show and sale.

Certificates

Kiln Building for Professional Potters - 5007113029

(Offered at SEC)

PC	110	Introduction to Pottery	7
PC	250	Professional Kiln Design	5
PC	252	Professional Kiln Building	5
		Total	**17**

Professional Raku Pottery - 5007113019

(Offered at SEC)

PC	110	Introduction to Pottery	7
PC	254	Professional Raku Pottery I	5
PC	256	Professional Raku Pottery II	5
		Total	**17**

Professional Studio Artist

The Professional Studio Artist (PSA) program prepares individuals for careers as independent studio artists and business owners, designers, performers and studio technicians. The curriculum offers technical, design, product development and performance classes in a variety of disciplines coupled with business, marketing and management courses. Class work covering the history and traditions of each discipline, basic studio development and technology requirements will be a vital part of the student's education. Students will complete a track of study and acquire the necessary technical proficiencies, creative problem solving, business skills, production processes and the knowledge to apply these aspects to careers in the craft, music, theater, or applied arts fields.

The AAS Track in Wood/Furniture Design prepares a student to start a business in studio furniture design and manufacturing, begin employment as a designer/maker for a small to mid-size woodworking company, work as a model maker/prototype builder for the wood/furniture industry, work as a furniture maker/technician, start a career as a furniture conservationist, or pursue a four-year degree. The program of study will offer a diverse and comprehensive study in furniture design and making; the technology of wood as a material; the technical aspects of wood machinery and hand tool usage; the importance and applications of drawing and design; and the practicality of business ownership, craft marketing and business management.

The diploma in Wood Studio Technician and the certificate in Furniture Making Fundamentals will afford students the opportunity to acquire specialized and basic technical skills as furniture makers. The Wood Studio Certificate will give the student an intensive foundation in woodworking techniques and studio practice. The diploma and certificate programs signify that the student possesses a basic understanding of woodworking and furniture making procedures necessary for entry-level positions in the custom furniture industry.

The AAS Jewelry/Metals Track prepares a student to start a business in studio jewelry design, producing one-of-a-kind and limited production works for the private market; work in a commercial studio as a professional jeweler or as a model designer/fabricator; or to enter into the field of jewelry/metal conservation. Creative problem solving and functional design are essentials to the program as well as extensive laboratory coursework in all aspects of bench jewelry repair, the metallurgical science of precious metals, traditional and non-traditional metal processes, processes of jewelry mass production, silversmithing, goldsmithing and work in new technologies such as computer-aided jewelry design.

The diploma in Jewelry/Metals Technician and the certificate in Jewelry/Metals Fundamentals will afford students the opportunity to acquire specialized and basic technical skills as jewelry makers and technicians. The Jewelry Studio certificate will give the student an intensive foundation in metals technique and studio practice. The diploma and certificate programs signify that the student possesses a basic understanding of jewelry design and making procedures necessary for entry-level positions in the custom or commercial jewelry industry.

The AAS Track in Bluegrass & Traditional Music prepares a student to begin work as a professional bluegrass and traditional musician in the areas of performance, touring, studio recording, studio engineering, and song writing. The track also provides training in music business, management and event promotion while providing the student preparation to pursue a four-year degree. Program studies will offer in-depth mentoring and "real world" performance situations for solo, ensemble, and instrumental musicians as well as recording session set-up, sound enhancement and band management.

The diploma in Bluegrass & Traditional Studio Artist and the certificate in Bluegrass & Traditional Music Fundamentals will afford students the opportunity to acquire training in the basics of performance, recording, songwriting and management. The diploma and certificate programs signify that the student possesses a basic understanding of the major components necessary for an entry-level career in Bluegrass and Traditional Music.

The AAS track in Ceramics prepares a student to start a business in studio production for pottery, tiles, slip casting, mold making and/or kiln building; begin employment as a studio technician to maintain equipment and manage various kinds of kiln firings; work for commercial ceramics businesses as a production designer, decorator, mold-maker, decal maker, conservationist, kiln and/or glaze technician; or to pursue higher degrees in the field of ceramics. The program is designed to prepare students to become independent and self-reliant ceramicists in creative and functional design.

The diploma in Ceramics Studio Technician and the certificate in Ceramics Fundamentals will afford students the opportunity to acquire specialized and basic technical skills as a ceramicist and technician. The Ceramics Studio Certificate will give the student an intensive foundation in ceramics technique and studio practice. The diploma and certificate programs signify that the student possesses a basic understanding of ceramic object design and fabrication techniques necessary for entry-level positions in custom or commercial ceramic industry.

Documentation of digital literacy as defined by KCTCS is required prior to enrolling in the first PSA course.

Associate in Applied Science

Professional Studio Artist - 5002017019

(Offered at HZC)

ENG	101	Writing I	3
MAT	110	Applied Mathematics OR	3
		Any higher level Quantitative Reasoning course	(3)
COM	252	Introduction to Interpersonal Communications OR	3
COM	181	Basic Public Speaking	(3)
		Heritage/Humanities**	3
		Natural Sciences	3-4
		Social/Behavioral Sciences	3
		Subtotal	**18-19**

**HUM 202 for Bluegrass and Traditional Music Track

Wood/Furniture Design Track - 500201701

ART	110	Drawing I	3
ART	112	2-Dimensional Design	3
ART	113	3-Dimensional Design	3
BAS	200	Small Business Management	3
ACT	101	Fundamentals of Accounting I	3
PSW	111	Introduction to Furniture Making	3
PSW	115	Furniture Making II	3
PSW	116	Wood Finishing	2
PSW	117	Wood Turning for Furniture	3
PSW	210	Furniture Making III	3
PSW	211	Wood Bending and Veneering	3
PSW	212	Chair Design	3
PSW	215	Furniture Making IV	3
PSW	220	Furniture/Wood Product Development	2
PSA	240	Professional Artist Seminar	3
		Subtotal	**43**
		Total Credits	**61-62**
PSW	230	Furniture Making V (Optional)	(6)

Jewelry/Metals Track - 500201702

ART	112	Drawing I	3
ART	113	2-Dimensional Design	3
ART	130	3-Dimensional Design	3
BAS	200	Small Business Management	3
ACT	101	Fundamentals of Accounting I	3
PSJ	110	Jewelry/Metals I	3
PSJ	115	Jewelry/Metals II	3
PSJ	116	Ancient Techniques	3
PSJ	117	Metal Casting /Finishing Techniques	2
PSJ	210	Jewelry/Metals III	3
PSJ	211	Hollowware and Metal Forming	3
PSJ	212	Metallurgy of Precious Metals	2
PSJ	215	Jewelry/Metals IV	3
PSJ	216	Stone Setting	3
PSJ	220	Jewelry/Metals Product Development	2
PSA	240	Professional Artist Seminar	3
		Subtotal	**45**
		Total Credits	**63-64**
PSJ	230	Jewelry/Metals IV (Optional)	(6)

Bluegrass and Traditional Music Track - 500201703

(Offered HZC)

BAS	200	Small Business Management	3
ACT	101	Fundamentals of Accounting I	3
MUS	174	Theory for Non-Music Majors	3
MUC	150	Classic Instruction to Piano OR Competency by audition	0-1
PSM	101	Bluegrass & Traditional Music History I	3
PSM	105	Recording I	1
PSM	107	Songwriting I	1
PSM	112	Individual String Instrument Instruction x 4	4
PSM	113	Guitar I OR Competency by audition	0-1
PSM	114	Bluegrass & Traditional Band/Ensemble x4	8
PSM	118	Bluegrass & Traditional Harmony/Part Singing	2
PSM	121	Bluegrass & Traditional Music History II	3
PSM	125	Recording II OR	1
PSM	117	Songwriting II	(1)
PSM	231	Bluegrass & Traditional Music III	3
PSM	235	Recording III OR	2
PSM	217	Songwriting III	(2)
PSM	245	Recording IV OR	2
PSM	227	Songwriting IV	(2)
PSA	240	Professional Artist Seminar	3
		Subtotal	**42-44**
		Total Credits	**60-63**
PSM	241	Bluegrass & Traditional Music IV	(3)
PSM	250	Field Experience/Production Business	(3)

Ceramics Track - 500201704

ART	110	Drawing I	3
ART	112	2-Dimensional Design	3
ART	113	3-Dimensional Design	3
BAS	200	Small Business Management	3
ACT	101	Fundamentals of Accounting I	3
PSC	112	Ceramics I	3
PSC	115	Ceramics II	3
PSC	117	Glaze Calculations	3
PSC	210	Ceramics III	3
PSC	211	Kiln Operation and Design	3
PSC	212	Ceramic Production Techniques	3
PSC	215	Ceramics IV	3
PSC	220	Ceramics Product Development	3
PSC	230	Ceramics V	3
PSA	240	Professional Artist Seminar	3
		Subtotal	**45**
		Total Credits	**63-64**

Diplomas

Wood Studio Technician - 5002014019

ENG	101	Writing I	3
MAT	110	Applied Mathematics OR	3
		Any higher level Quantitative Reasoning course	(3)
		Subtotal	**6**

Technical/Support Courses

		Digital Literacy OR Digital Competency by exam	0-3
ART	110	Drawing I	3
ART	130	3-Dimensional Design	3
BAS	200	Small Business Management	3
PSW	111	Introduction to Furniture Making	3
PSW	115	Furniture Making II	3
PSW	116	Wood Finishing	2
PSW	117	Wood Turning for Furniture	3
PSW	211	Wood Bending and Veneering	3
PSW	215	Furniture Making IV	3
PSW	220	Furniture/Wood Product Development	2
		Subtotal	**28-31**
		Total Credits	**34-37**

Jewelry/Metals Technician - 5002014029

ENG	101	Writing I	3
MAT	110	Applied Math OR Any higher level math	3
		Subtotal	**6**

Technical/Support Courses

		Digital Literacy OR Digital Competency by exam	0-3
ART	110	Drawing I	3
ART	113	3-Dimensional Design	3
BAS	200	Small Business Management	3
PSJ	110	Jewelry/Metals I	3
PSJ	115	Jewelry/Metals II	3
PSJ	117	Metal Casting /Finishing Techniques	2
PSJ	210	Jewelry/Metals III	3
PSJ	211	Hollowware and Metal Forming	3
PSJ	212	Metallurgy of Precious Metals	2
PSJ	215	Jewelry/Metals IV	3
PSJ	216	Stone Setting	3
		Subtotal	**31-34**
		Total Credits	**37-40**

Bluegrass & Traditional Studio Artist - 5002014039

(Offered at HZC)

General Education:

Area 1 =	Written/ Oral Communications, and/or Heritage/Humanities	3-6
Area 2 =	Social/Behavioral Science, Natural Science and/or Quantitative Reasoning	3-6
	Subtotal	9

Support Courses

BAS	200	Small Business Management	3
HUM	202	Survey of Appalachian Studies I	3
MUS	174	Theory for Non-Music Majors	3
		Subtotal	**9**

Technical Courses

		Digital Literacy OR	0-3
		Digital Literacy Competency by exam	
PSM	101	Bluegrass & Traditional Music History I	3
PSM	113	Guitar I OR	0-1
		Competency by audition	
PSM	105	Recording I	1
PSM	107	Songwriting I	1
PSM	112	Individual String Instrument Instruction x4	4
PSM	114	Bluegrass & Traditional Band/Ensemble x4	8
PSM	241	Bluegrass & Traditional Music IV (elective)	0-3
PSM	250	Field Experience/Production/Business (elective)	0-3
		Subtotal	**17-27**
		Total Credits	**35-45**

Ceramics Studio Technician - 5002014049

ENG	101	Writing I	3
MAT	110	Applied Mathematics OR	3
		Any higher level Quantitative Reasoning course	(3)
		Subtotal	**6**

Technical/Support Courses

		Digital Literacy OR	0-3
		Digital Competency by exam	
ART	110	Drawing I	3
ART	113	3-Dimensional Design	3
BAS	200	Small Business Management	3
PSC	112	Ceramics I	3
PSC	115	Ceramics II	3
PSC	117	Glaze Calculations	2
PSC	210	Ceramics III	3
PSC	211	Kiln Operation and Design	3
PSC	212	Ceramic Production Techniques	3
PSC	215	Advanced Ceramics IV	3
		Subtotal	**30-33**
		Total Credits	**36-39**

Certificates

Furniture Making Fundamentals - 5002013029

ART	110	Drawing I	3
PSW	111	Introduction to Furniture Making	3
PSW	115	Furniture Making II	3
PSW	116	Wood Finishing	2
PSW	211	Wood Bending and Veneering	3
		Total Credits	**14**

Wood Furniture Studio - 5002013059

PSW	111	Introduction to Furniture Making	3
PSW	115	Furniture Making II	3
PSW	116	Wood Finishing	2
PSW	117	Wood Turning for Furniture	3
PSW	211	Wood Bending and Veneering	3
		Total Credits	**14**

Jewelry/Metals Fundamentals - 5002013019

ART	110	Drawing I	3
ART	112	2-Dimensional Design	3
PSJ	110	Jewelry/Metals I	3
PSJ	115	Jewelry/Metals II	3
PSJ	210	Jewelry/Metals III	3
		Total Credits	**15**

Jewelry Studio - 5002013069

PSJ	110	Jewelry/Metals I	3
PSJ	115	Jewelry/Metals II	3
PSJ	116	Ancient Techniques	3
PSJ	117	Metal Casting/Finishing Techniques	2
PSJ	211	Hollowware and Metal Forming	3
PSJ	212	Metallurgy of Precious Metals	2
		Total Credits	**16**

Bluegrass & Traditional Music Fundamentals - 5002013039

(Offered at HZC)

BAS	200	Small Business Management	3

Technical Courses

PSM	112	Individual String Instrument Instruction x2	2
PSM	105	Recording I	1
PSM	107	Songwriting I	1
PSM	114	Bluegrass & Traditional Band/Ensemble x2	4
PSM	101	Bluegrass & Traditional Music History I	3
PSM	113	Guitar I OR	0-1
		Competency by audition	
		Total Credits	**14-15**

Audio Recording – 5002013089

(Offered at HZC)

BAS	200	Small Business Management	3

Guided Electives (Select 2 of the following):

PSM	101	Bluegrass & Traditional Music History I	3
MUS	100	Intro to Music	3
MUS	104	Introduction to Jazz History	3
MUS	222	History and Sociology of Rock Music	3

Technical Electives (Select 1 of the following):

PSM	107	Songwriting I	1
PSM	112	Individual Stringed Instruction	1
PSM	113	Guitar I	1

Technical Courses

PSM	105	Recording I	1
PSM	125	Recording II	1
PSM	235	Recording III	2
PSM	245	Recording IV	2
		Total Credits	**16**

Ceramics Fundamentals - 5002013049

ART	110	Drawing I	3
ART	112	2-Dimensional Design	3
PSC	112	Ceramics I	3
PSC	115	Ceramics II	3
PSC	117	Glaze Calculations	3
PSC	211	Kiln Operation and Design	3
		Subtotal	**18**

Ceramics Studio -5002013079

PSC	112	Ceramics I	3
PSC	115	Ceramics II	3
PSC	117	Glaze Calculations	3
PSC	211	Kiln Operation and Design	3
PSC	212	Ceramics Production Techniques	3
		Subtotal	**15**

Project Lead the Way

Project Lead the Way complements traditional college-preparatory academic studies with challenging career/technical studies, providing students with hands-on exposure to real-life engineering challenges.

Certificate

Engineering Related – PLTW – 1515993019

(Offered at OWC, MDC, SEC)

PLW	100	Introduction to Engineering Design	4
PLW	125	Principles of Engineering	4
PLW	150	Digital Electronics	4
PLW	200	Aerospace Engineering or	4
PLW	225	Civil Engineering and Architecture or	(4)
PLW	250	Computer Integrated Manufacturing	(4)
PLW	295	Engineering Design and Development	4
		Total Credits	**20**

Quality Management Systems

The Quality Management Systems program prepares students to analyze and implement systems for continuous improvement of functions and processes for the manufacturing, government, and service sectors. Students are taught to analyze and solve quality problems, prepare inspection plans and instructions, and select sampling plan applications. Emphasis is placed on learning the tools and techniques for controlling processes, improving process reliability, improving efficiencies, and eliminating defects. Upon completion of the program, graduates are qualified for employment in entry-level managerial or supervisory positions. Course work uses and reflects the body of knowledge found in professional quality certifications such as offered by the American Society for Quality.

Associate in Applied Science

Quality Management Systems - 1507027019

General Education

ENG	101	Writing I	3
ENG	102	Writing II	3
ENG	203	Business Writing OR	3
ENG	204	Technical Writing	(3)
COM	181	Basic Public Speaking	3
MA	109	College Algebra OR	3
MAT	150	College Algebra	(3)
		Social/Behavioral Sciences Course	3
		Heritage/Humanities course	3
		Natural Sciences Course	3
		Elective	3
		Subtotal	**27 hrs.**

Technical Core 18 -21 hrs.

		Computer/Digital Literacy	0-3
QMS	101	Introduction to Quality Systems	3
QMS	201	Customer Service Improvement Skills	3
QMS	202	Performance Management	3
QMS	220	Quality Audits	3
QMS	240	Statistics for Quality I	3
QMS	242	Statistics for Quality II	3
		Subtotal	**18-21 hrs.**

Technical Support Courses—15 -17 hrs.

QMS	210	Lean Processes	3
QMS	212	Project Management	3
QMS	251	Strategic Quality Planning	3
QMS	262	Design of Experiments	4
QMS	299	Topics in Quality Management Systems: (Topic)	1-6
BAS	212	Introduction to Financial Management	3
BRX	120	Basic Blue Print reading	3
CAD	100	Introduction to Computer-Aided Design	3
CAD	150	Introduction to Programming	4
CAD	200	Intermediate Computer-Aided Design	4
CAD	201	Advanced Computer-Aided Design	3
COE	199	Cooperative Education	1-4
ECO	101	Contemporary Economic Issues	3
ELT	110	Circuits I	5
ELT	114	Circuits II	5
ENV	110	Introduction to Environmental Technology	4
ELT	102	Blue Print Reading	2
ELT	261	Instrumentation and Measurement	3
ISX	101	Introduction to Industrial Safety	3
IS	201	Occupational Health and Industrial Hygiene Methods	4
ISX	100	Industrial Safety	3
ME	105	Basic Engineering Graphics	3
MFG	145	Manufacturing Process	3
MFG	256	Production Management	3
MFG	265	Robotics Fundamentals	3
		Total	**60 - 65**

Diploma

Quality Technician - 1507024029

(Offered at HPC)

General Education

ENG	101	Writing I	3
MAT	150	College Algebra	3
		Subtotal	**6**

Technical Component

		Computer/Digital Literacy	0-3
BRX	120	Basic Blue Print Reading	3
QMS	101	Introduction to Quality Systems	3
QMS	201	Customer Service Improvement Skills	3
QMS	202	Performance Management	3
QMS	220	Quality Audits	3
QMS	240	Statistics for Quality I	3
QMS	242	Statistics for Quality II	3
		Subtotal	**28-31**

Technical Course form AAS List			3
		Total	**34-37**

Certificates

Lean Manufacturing Facilitator – 1507023119

QMS	101	Introduction to Quality Systems	3
QMS	210	Lean Processes	3
QMS	220	Quality Audits	3
		Computer/Digital Literacy	0-3
		Total Credits	**9-12**

Quality Support - 1507023059

MA	109	College Algebra OR	3
MAT	150	College Algebra	(3)
QMS	101	Introduction to Quality Systems	3
QMS	240	Statistics for Quality I	3
QMS	242	Statistics for Quality II	3
		Total	**12**

Quality Monitor - 1507023069

(Offered at HPC)

ENG	101	Writing I	3
MA	109	College Algebra OR	3
MAT	150	College Algebra	(3)
QMS	101	Introduction to Quality Systems	3
QMS	201	Customer Service Improvement Skills	3
QMS	202	Performance Management	3
QMS	220	Quality Audits	3
QMS	240	Statistics for Quality I	3
QMS	242	Statistics for Quality II	3
		Total	**24**

Quality Leader - 1507023079

QMS	101	Introduction to Quality Systems	3
QMS	201	Customer Service Improvement Skills	3
QMS	202	Performance Management	3
QMS	251	Strategic Quality Planning	3
		Total	**12**

Quality Specialist I - 1507023089

QMS	101	Introduction to Quality Systems	3
QMS	220	Quality Audits	3
QMS	240	Statistics for Quality I	3
QMS	242	Statistics for Quality II	3
		Total	**12**

Quality Specialist II - 1507023099

QMS	220	Quality Audits	3
QMS	240	Statistics for Quality I	3
QMS	242	Statistics for Quality II	3
QMS	262	Design of Experiments	4
		Total	**13**

Quality Auditor - 1507023109

ENG	101	Writing I	3
ENG	102	Writing II	3
ENG	203	Business Writing OR	3
ENG	204	Technical Writing	(3)
QMS	201	Customer Service Improvement Skills	3
QMS	220	Quality Audits	3
		Total	**15**

Radiography

This program prepares the individual to become a radiographer. The radiographer is prepared to administer ionizing radiation for medical diagnostic imaging purposes. Emphasis is on radiation protection and quality patient care. The curriculum is comprised of specialized courses in radiography with concentrated study in the basic sciences, mathematics and general education. Students enrolled in the Radiography program must achieve a minimum grade of "C" in each Radiography course, required natural science course, and required quantitative reasoning course. Upon completion of the program, the graduate is eligible to apply to write the examination for registration as a radiographer by the American Registry of Radiologic Technologists. Radiographers may find positions in hospitals, health clinics, and physicians' offices. Research laboratories and some industrial firms may also employ radiographers. The curriculum requires attendance in the summer session, fall and spring semesters. Note: CPR certificate must be obtained prior to enrolling in IMG 100 or IMG 104, IMG 106 and IMG 108 and certification must be kept current throughout the program. Note: Documentation of digital literacy as defined by KCTCS is required prior to admission to IMG courses.

Advanced Imaging in Radiography focuses on the areas of Computed Tomography (CT) and Magnetic Resonance Imaging (MRI) in the Radiological Sciences. Didactic and clinical instruction prepares the technologist to work in the areas of CT and MRI in the healthcare setting and to sit for the Advanced Board Exams given by the American Registry of Radiologic Technologists. These courses are offered for technologists who are currently registered by the American Registry of Radiologic Technologists in Radiography or the Nuclear Medicine Technology Certification Board in Nuclear Medicine, or students who have completed one year and are currently enrolled in an accredited radiography or nuclear medicine program, or by consent of the instructor. The core curriculum courses are intended to provide the student with an overall knowledge of advanced patient care and sectional anatomy. The CT and MRI tracks focus on the physics, instrumentation and imaging techniques of these modalities. The student may choose CT or MRI or both. Although these courses are organized in a hierarchical pattern, depending on the entry-level knowledge and the needs of the student, they may be taken out of sequence with consent of the instructor.

Note: Hours Exception (71-75 for the A.A.S. and 56-62 for the Diploma) approved by the KCTCS Board of Regents in June 2010.

Associate in Applied Science

Radiography - 5109117019

(Offered at BLC, ELC, HZC, JFC, MDC, OWC, SEC, SKY, SMC,WKC)

General Education:

		Social/Behavioral Sciences	3
		Heritage/Humanities	3
		Oral Communications	3
ENG	101	Writing I	3
MAT	150	College Algebra OR	3
		Higher Level Quantitative Reasoning Course	(3)
BIO	137	Human Anatomy & Physiology I	4
BIO	139	Human Anatomy & Physiology II	4
PHY	172	Physics for Health Sciences OR	2
PHY	152	Introduction to Physics OR	(3)
PHY	171	Applied Physics	(4)
		Subtotal	**25-27**

Support Course:

CLA	131	Medical Terminology from Greek & Latin OR	3
AHS	115	Medical Terminology	(3)
		Subtotal	**3**

Pathway 1 – 510911701

(Offered at BLC, HZC, SEC)

Technical Courses:

IMG	100	Radiography I	7
IMG	101	Clinical I	4
IMG	110	Radiography II	7
IMG	111	Clinical II	4
IMG	201	Clinical III	3
IMG	210	Radiography IV	4
IMG	211	Clinical IV	6
IMG	220	Radiography V	4
IMG	221	Clinical V	6
		Subtotal	**45**
		Total Credits Pathway 1	**73-75**

Pathway 2 – 510911702

(Offered at ELC, JFC, MDC, OWC, SEC, SKY, SMC,WKC)

Technical Courses:

IMG	104	Introduction to Radiography	2
IMG	106	Patient Care in Radiography*	2
IMG	108	Radiographic Procedures I	4
IMG	109	Clinical Practice I	1
IMG	114	Image Production and Acquisition	2
IMG	116	Advanced Patient Care in Radiography	2
IMG	118	Radiographic Procedures II	4
IMG	119	Clinical Practice II	3
IMG	209	Clinical Practice III	3
IMG	214	Imaging Equipment	2
IMG	216	Basic Computed Tomography	1
IMG	219	Clinical Practice IV	6
IMG	224	Radiation Protection & Biology	2
IMG	226	Radiography Pathology	1
IMG	228	Radiography Seminar	2
IMG	229	Clinical Practice V	6
		Subtotal	**43**
		Total Credits Pathway 2	**71-73**

*NAA 100 may be substituted for IMG 106.

Certificate

Advanced Imaging in Radiography- 5109113029

Core

IMG	230	Sectional Anatomy for Advanced Imaging	3
IMG	240	Pathology for Advanced Medical Imaging Modalities	3
		Subtotal	**6**

Computed Tomography Track – 510911301

(Offered at HZC, OWC, SEC, SMC)

IMG	250	Computed Tomography Physics and Instrumentation	3
IMG	260	Computed Tomography Imaging Procedures	3
		Subtotal	**6**
		Total Credits	**12**

Computed Tomography with Clinical Track – 510911302

(Offered at OWC, SMC,WKC)

IMG	250	Computed Tomography Physics and Instrumentation	3
IMG	260	Computed Tomography Imaging Procedures	3
IMG	285	Computed Tomography Clinical Practice I	4
		Subtotal	**10**
		Total Credits	**16**

Magnetic Resonance Imaging Track – 510911303

(Offered at HZC, OWC, SEC SMC)

IMG	255	Magnetic Resonance Physics and Instrumentation	3
IMG	265	Magnetic Resonance Imaging Technology	3
		Subtotal	**6**
		Total Credits	**12**

Respiratory Care

The Respiratory Care program prepares the graduate to take an active role in the maintenance and/or restoration of cardiopulmonary homeostasis. The curriculum includes intensive course work in the supporting sciences and general education areas. Classroom instruction is supplemented with learning experiences in the campus laboratory and in area clinical affiliates. Students enrolled in the Respiratory Care program are required to achieve a minimum grade of "C" in each Respiratory Care course.

Although hospitals employ the majority of respiratory therapists, other employers include home care providers, medical clinics, nursing homes, and industry. Graduates are qualified to take the National Board for Respiratory Care examination in order to receive the Certified Respiratory Therapist (C.R.T.) credential. Graduates who successfully completed the CRT examination may additionally take the advanced practice examinations and receive the Registered Respiratory Therapist (RRT) credential.

*Note: The Kentucky Board for Respiratory Care may deny mandatory certification for convicted felons. Questions should be directed to the Kentucky Board for Respiratory Care.

* Note: Digital literacy must be documented by competency exam or by completing a digital literacy course.

Note: Hours Exception (67-70 for the A.A.S) approved by the KCTCS Board of Regents in June 2010.

Associate in Applied Science

Advanced Practice Respiratory Therapist - 5109087049

(Offered at ASC, BLC, BSC, ELC, JFC, MDC, MYC, SEC, SKY, SMC)

BIO	137	Human Anatomy & Physiology I*	4
BIO	139	Human Anatomy & Physiology II*	4
MAT	150	College Algebra* OR	3
MAT	110	Applied Mathematics* OR	(3)
MAT	146	Contemporary College Mathematics*	(3)
		Oral Communications*	3
		Social/Behavioral Sciences *	3
ENG	101	Writing I *	3
		Heritage/Humanities*	3
		General Education Total	**23**

Recommended Additional Course(s)

		Medical Terminology	(3)
ENG	102	Writing II	(3)
BIO	226	Principles of Microbiology OR	(3)
BIO	225	Medical Microbiology	(4)

Technical Courses

RCP	110	Cardiopulmonary Anatomy & Physiology	3
RCP	120	Theory & Principles of Respiratory Care OR	4
RCP	122	Fundamentals of Respiratory Care#	(4)
RCP	125	Cardiopulmonary Evaluation OR	4
RCP	140	Cardiopulmonary Assessment#	(2)
RCP	130	Pharmacology OR	3
HST	121	Pharmacology**	(2)
RCP	150	Clinical Practice I OR	2
HST	101	Basic Skills I** OR	(3)
RCP	121	Respiratory Care Practice I#	(1)
RCP	175	Clinical Practice II OR	3
RCP	176	Respiratory Care Practice II#	(2)
RCP	180	Ventilatory Support AND	3
RCP	190	Advanced Ventilitory Support OR	2
RCP	185	Introduction to Mechanical Ventilation# AND	(2)
RCP	195	Patient-Ventilator System Management#	(4)
RCP	200	Clinical Practices III OR	3
RCP	201	Respiratory Care Practice III#	(2)
RCP	204	Emergency and Special Procedures AND	3

RCP	214	Advanced Diagnostic Procedures OR	3
RCP	240	Advanced Cardiopulmonary Evaluation# AND	(3)
RCP	245	Advanced Cardiac Life Support#	(2)
RCP	210	Cardiopulmonary Pathophysiology OR	3
HST	122	Clinical Pathophysiology**	(3)
RCP	212	Neonatal/Pediatric Respiratory Care	3
RCP	225	Clinical Practice IV OR	3
RCP	226	Respiratory Care Clinical Practice IV#	(4)
RCP	228	Preventive and Long Term Respiratory Care	2
RCP	250	Clinical Practice V OR	3
RCP	251	Respiratory Care Practice V#	(4)
		Elective (BCTC requires RCP 260)	0-1
		Technical Course Credit Total	47
		Technical Course Credit Total#	45
		Total Credits	**68-70**

*General Education Course

**May not be accepted at Elizabethtown CTC or Madisonville CC for Respiratory Care degree program credit.

RCP courses currently only offered and required at BCTC for degree completion at that college.

Certificates

Polysomnographic Technologist - 5109083069

BIO	137	Human Anatomy & Physiology I*	4
BIO	139	Human Anatomy & Physiology II*	4
ENG	101	Writing I	3
MAT	150	College Algebra* OR	3
MAT	146	Contemporary College Mathematics* OR	(3)
MAT	110	Applied Mathematics*	(3)
AHS	115	Medical Terminology	3
		Subtotal	**17**

Technical Courses

PSG	100	Introduction to Polysomnography	2
PSG	110	Polysomnography Level I	3
PSG	111	Polysomnography Lab I	1
PSG	115	Polysomnography Practice I	3
PSG	130	Polysomnography Level II	3
PSG	131	Polysomnography Lab II	1
PSG	133	Pathology of Sleep and Related Disorders	3
PSG	135	Polysomnography Practice II	3
		Subtotal	**19**
		Total Credits	**36**

*General Education Course

Electrocardiographic and Cardiac Monitoring Technician - 5109083049

(Offered at BLC, BSC, ELC, JFC, SKY)

BIO	137	Human Anatomy & Physiology I*	4
BIO	139	Human Anatomy & Physiology II*	4
MAT	150	College Algebra* OR	3
MAT	146	Contemporary College Mathematics* OR	(3)
MAT	110	Applied Mathematics*	(3)

Technical Courses

RCP	110	Cardiopulmonary Anatomy & Physiology	3
RCP	125	Cardiopulmonary Evaluation OR	4
RCP	140	Cardiopulmonary Assessment	(2)
RCP	150	Clinical Practice I ** OR	2
RCP	121	Respiratory Care Practice I**	(1)
HST	101	Basic Skills I**+	(3)
		Total Credits	**17-21**

* General Education Course

**May not be accepted at Elizabethtown CTC or Madisonville CC for Respiratory Care degree program credit.

+ In addition Twenty (20) hours of documented clinical Electrocardiographic experience or documented Electrocardiographic & Cardiac Monitoring Competence is required.

RCP courses currently only offered and required at BCTC to complete certificate.

Security Management

The Security Management Coordinator program provides a comprehensive overview of physical security policies, procedures and techniques. Topics covered are perimeter protection, intrusion detection, access control, CCTV, locks and locking devices, lighting, security design and surveys, contingency planning, and acts of violence. Instruction in all types of security hardware: electronic and mechanical door locks, access control systems and their devices, as well as intrusion detection systems and cameras, safes and safe hardware is available.

The Supply Chain Security program provides an overview of the needs and requirements for a safe, secure supply chain. The program looks at threats, and offers solutions. The House Select Committee on Homeland Security issued a comprehensive assessment (February 2004) on the United State's levels of preparation against terrorist activity. The Committee concluded in part "Pathways to the United States by land, sea and air are insecure." Security throughout transportation, storage, shipping and receiving of cargo is addressed in this program. The concept of proactive verses reactive, planning and the overall needs of a security operation are discussed. Specific security systems are discussed, as well as the creation and implementation of security policies. Basic security equipment and procedures, including perimeter protection, intrusion detection, security surveys and CCTV systems are covered, as well as management issues to include terrorism, crisis management and basic guard force management. A Security Design section of the program looks at ways to maximize the security benefit within operational (financial and aesthetic) constraints.

The Antiterrorism Physical Security Specialist program provides a comprehensive overview of a physical security program. Topics covered are access control systems; intrusion detection, both interior and exterior; crisis management; national incident management systems; contracting guard forces; international and domestic terrorism and their threat to America; security surveys/security audits; managing a security operation; IT security; CCTV; contingency planning; locks and locking devices; workplace violence; and perimeter security.

The Safe & Lock Technician program provides a comprehensive hands-on knowledge of safes and locks. This program will provide the technician with the training to service, maintain and troubleshoot safes and locks. Topics covered are electronic access control systems, safe lock servicing – electronic and mechanical, combination lock manipulation, basic safe penetration, locks and locking devices, safe and safe hardware, security hardware, electronic and mechanical door locks.

For all programs: Students will be required to undergo a criminal background investigation. If a student is presently employed by a law enforcement or federal agency that requires criminal checks, this requirement may be waived by LSI.

Certificates

Security Management Coordinator - 4301123010

(Offered at BLC)

LSI	120	Comprehensive Security Specialist	4
LSI	140	Managing Terrorism & Other Crises	1
LSI	150	Professional Locksmithing	4
		Electives	3
		Total Credits	**12**

Electives: A minimum of 3 credit hours must be taken from this list of electives:

LSI	100	Fundamental Principles of Physical Security	2
LSI	105	Force Protection	3
LSI	110	Security Surveys	2
LSI	115	Command Security Officer Training	4
LSI	130	GSA: Locks, Vaults & Containers	4
LSI	131	GSA: Locks, Vaults & Containers Certified Inspector Training	1
LSI	151	Basic Safe Penetration	1
LSI	152	Combination Lock Manipulation	1
LSI	153	Safe Lock Servicing - Mechanical and Electronic	2
LSI	160	Fundamentals of Electricity	2
LSI	170	Electronic Access Control	2
LSI	180	Security and Crime Prevention Management	1
LSI	185	Security and Crime Prevention Countermeasures	1
LSI	190	Security Hardware & Bypass Techniques	1
LSI	195	Tactical Lock (restricted enrollment)	8

Safe & Lock Technician - 4301123040

LSI	150	Professional Industrial Locksmithing	4
LSI	153	Safe Lock Servicing	2
		Electives	10
		Total Credits	**16**

Electives: A minimum of 10 credit hours must be taken from this list of electives.

LSI	110	Security Surveys	2
LSI	130	GSA: Lock, Vault & Container	4
LSI	151	Basic Safe Penetration	1
LSI	152	Combination Lock Manipulation	1
LSI	160	Fundamentals of Electricity	2
LSI	170	Electronic Access Control	2
LSI	182	Managing Security Operations	2

Social Media Marketing

The Social Media Marketing program will provide students who are interested in social media technology, and the specific way it can be utilized for maximizing visibility and functionality within the business sector, a holistic approach to running a social media marketing campaign. This program will provide not only an introduction to social media technology, but also a foundation for students to learn everything from terminology to multi-platform engagement techniques.

Certificate

Social Media Marketing -1110053009

(Offered at)

General Education Courses

BAS	125	Social Media Marketing: Fundamental Concepts, Skills and Strategies	3
BAS	126	Social Media Marketing: Project Management and Implementation Strategies	3
		Subtotal	**6**

Surgical First Assisting

The Surgical First Assistant provides aid in exposure, hemostasis, and other technical functions that will help the surgeon carry out a safe operation with optimal results for the patient. This role will vary considerably with the surgical operation, specialty area, and type of facility. Clinical skills performed under direct supervision of the surgeon include the following: positioning the patient, preparing the skin, providing visualization of the operative site, utilizing appropriate techniques to assist with hemostasis, participating in volume replacement or auto transfusion techniques as appropriate, utilizing appropriate techniques in the closure of body planes, selecting and applying appropriate wound dressings and providing assistance in securing drainage system to tissue.

This program provides clinical experience built upon classroom instruction in the basic sciences, patient care, aseptic techniques and surgical procedures. Students enrolled in the Surgical First Assistant Program are required to achieve a minimum grade of "C" in each Surgical First Assistant course. Graduates from the program are eligible to take the certifying exams offered by the National Surgical Assistant Association (CSA) or the National Board of Surgical Technologists and Surgical Assistants (CSFA).

Associate in Applied Science

Surgical First Assisting - 5109097039

(Offered at MDC)

BIO	135	Basic Anatomy and Physiology with Laboratory	4
ENG	101	Writing I	3
MAT	150	College Algebra OR	3
MAT	110	Applied Mathematics	(3)
		Heritage/Humanities	3
		Social/Behavioral Sciences course	3
		Subtotal	**16**

Technical Courses:

		Digital Literacy	0-3
SUR	110	Surgical Technology Fundamentals	9
SUR	101	Surgical Technology Fundamentals/Lab	1
SUR	130	Principles of Surgical Pharmacology	2
SUR	200	Surgical Technology Advanced Theory	9
SUR	201	Surgical Technology Skills Practicum II	6
SUR	275	Surgical Technology Advanced Clinical Practicum	2
SUR	280	Surgical Anatomy	5
SUR	284	Principles of Surgical Assisting	3
SUR	295	Surgical First Assistant Clinical	1
SUR	282	Perioperative Bioscience	3
SUR	296	Surgical First Assistant Practicum	3
SUR	297	Surgical First Assistant Practicum II	1
		Subtotal	**45-48**
		Total Credit Hours	**61-64**

For program admission, student must be a certified Surgical Technologist or an RN with operating room experience OR consent of instructor.

For program admission, CPR or BLS certificate must be obtained prior to enrolling in the course; certification must be kept current throughout the program.

NOTE: BIO 137 & BIO 139 may be substituted for BIO 135.

Certificate

Surgical First Assisting - 5109093020

(Offered at MDC)

SUR	280	Surgical Anatomy	5
SUR	282	Perioperative Bioscience	3
SUR	284	Principles of Surgical Assisting	3
SUR	295	Surgical First Assistant Clinical	1
SUR	296	Surgical First Assistant Practicum	3
SUR	297	Surgical First Assistant Practicum II	1
		Total Credit Hours	**16**

CPR or BLS certificate must also be obtained prior to enrolling in the program; certification must be kept current throughout the program.

For program admission, student must be a certified Surgical Technologist or an RN with operating room experience. Student must provide current documentation of certificate/licensure.

Surgical Technology

Surgical technologists are allied health professionals who are an integral part of the team of medical practitioners providing surgical care to patients in a variety of settings such as medical offices, out-patient clinics, and the operating room.

The surgical technologist works under medical supervision to facilitate the safe and effective conduct of invasive surgical procedures. This individual works under the supervision of a surgeon to ensure that the operating room environment is safe, that equipment functions properly, and that the operative procedure is conducted under conditions that maximize patient safety.

A surgical technologist possesses expertise in the theory and application of sterile and aseptic techniques and combines the knowledge of human anatomy, surgical procedures, and implementation tools and technologies to facilitate a physician's performance of invasive therapeutic and diagnostic procedures.

This program provides clinical experience built upon classroom instruction in the basic sciences, patient care, aseptic techniques and surgical procedures. Students enrolled in the Surgical Technology Program are required to achieve a minimum grade of "C" in each course required for the credential. Students who withdraw from or earn less than a "C" in any course with a Surgical Technology prefix will be dropped from the Surgical Technology program and must reapply for admission. CPR (for Healthcare Professionals) requirements must be successfully completed prior to enrolling in the first surgical technology course and must be kept current throughout the program.

Students who have completed program requirements must sit for the certifying examination offered by the National Board on Certification for Surgical Technology and Surgical Assisting (NBSTSA), 6 West Dry Creek Circle, Suite 100; Littleton, CO 80120; Phone: (800) 707 0057; www.nbstsa.org.

The following programs hold accreditation from the Commission on Accreditation of Allied Health Education Programs (CAAHEP) 1361 Park Street, Clearwater Florida 33756; (727) 210 2350; www.caahep.org who accredits programs upon the recommendation of the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC/STSA), 6 West Dry Creek Circle, Suite 110; Littleton, CO 80120; Phone: (303) 694 9262; www.arcst.org.: Ashland Community and Technical College Bluegrass Community and Technical College, Hazard Community and Technical College, Jefferson Community and Technical College, Madisonville Community College, Owensboro Community and Technical College , Somerset Community College, Southcentral Kentucky Community and Technical College, Southeast Kentucky Community and Technical College, and West Kentucky Community and Technical College.

Associate in Applied Science

Surgical Technology - 5109097019

(Offered at BLC, BSC, HZC, JFC, MDC, OWC, SEC, SKY, SMC,WKC)

General Education:

BIO	137	Human Anatomy & Physiology I AND	4
BIO	139	Human Anatomy & Physiology II	4
MAT	110	Applied Mathematics OR	3
MAT	150	College Algebra OR	(3)
		Higher level Quantitative Reasoning Course	(3)
ENG	101	Writing I	3
		Social/Behavioral Sciences	3
		Heritage/Humanities	3
		Subtotal	**20**

Technical Courses:

		Digital Literacy	0-3
CLA	131	Medical Terminology from Greek & Latin OR	3
AHS	115	Medical Terminology OR	(3)
MIT	103	Medical Office Terminology	(3)
SUR	100	Surgical Technology Fundamentals/Theory OR	12
SUR	109	Introduction to Surgical Technology AND	(3)
SUR	110	Surgical Technology Fundamentals	(9)
BIO	225	Medical Microbiology OR	4
BIO	226	Principles of Microbiology OR	(3)
BIO	227	Principles of Microbiology with Laboratory OR	(5)
BIO	118	Microbes and Society	(3)
SUR	101	Surgical Technology Fundamentals Lab	1
SUR	130	Principles of Surgical Pharmacology	2
SUR	200	Surgical Technology Advanced Theory	9

A total of 10 credit hours must be completed from the following practicum courses:

SUR	125	Surgical Technology Skills Practicum I	2-3
SUR	201	Surgical Technology Skills Practicum II	6-7
SUR	275	Surgical Technology Advanced Clinical Practicum	2
		Subtotal	**40-45**
		Total Credits	**60-65**

Elective(s):

SUR	103	Surgical Technology Didactic Practicum	(1)
SUR	270	Pathophysiology for Surgical Technology OR	(2)
MAI	200	Pathophysiology for Medical Assistants	(3)
BAS	120	Personal Finance	(3)
MNA	100	Medicaid Nurse Aide OR	(3)
NAA	100	Nursing Assistant Skills I	(3)

Note:

CPR certificate must be obtained prior to enrolling in the first Surgical Technology course and certification must be kept current throughout the Program

Digital literacy must be demonstrated either by competency exam or by completing a digital literacy course.

Diploma

Surgical Technologist - 5109094019

(Offered at ASC, BSC, JFC, MDC, OWC)

General Education:

Area 1 =			
ENG	101	Writing I	3
Area 2 =			
BIO	135	Basic Anatomy & Physiology with Lab OR	4
BIO	137	Human Anatomy & Physiology I AND	(4)
BIO	139	Human Anatomy & Physiology II OR	(4)
		Subtotal	**7-11**

Technical Courses:

		Digital Literacy course or demonstrated competency	0-3
CLA	131	Medical Terminology from Greek & Latin OR	3
AHS	115	Medical Terminology OR	(3)
MIT	103	Medical Office Terminology	(3)
SUR	109	Introduction to Surgical Technology AND	(3)
SUR	110	Surgical Technology Fundamentals OR	(9)
SUR	100	Surgical Technology Fundamentals/Theory AND	12
BIO	225	Medical Microbiology OR	4
BIO	226	Principles of Microbiology OR	(3)
BIO	227	Principles of Microbiology with Laboratory OR	(5)
BIO	118	Microbes and Society	(3)
SUR	101	Surgical Technology Fundamentals Lab	1
SUR	130	Principles of Surgical Pharmacology	2
SUR	200	Surgical Technology Advanced Theory	9
WPP	200	Workplace Principles OR	3
BAS	250	Business Employability Seminar	(1)

A total of 10 credit hours must be completed from the following practicum courses:

SUR	125	Surgical Technology Skills Practicum I	2-3
SUR	201	Surgical Technology Skills Practicum II	6-7
SUR	275	Surgical Technology Advanced Clinical Practicum	2
		Subtotal	**38-48**
		Total Credits	**45-59**

Elective(s):

SUR	103	Surgical Technology Didactic Practicum	(1)
SUR	270	Pathophysiology for the Surgical Technologist OR	(2)
MAI	200	Pathophysiology for the Medical Assistant	(3)
EFM	100	Personal Financial Management OR	(3)
BAS	120	Personal Finance	(3)
MNA	100	Medicaid Nurse Aide OR	(3)
NAA	100	Nursing Assistant Skills I	(3)

Note:

CPR certificate must be obtained prior to enrolling in the first Surgical Technology course and certification must be kept current throughout the Program.

Digital literacy must be demonstrated either by competency exam or by completing a digital literacy course.

Students successfully completing SUR 109 and SUR 110 are not required to take a microbiology course for the diploma option.

Certificates

Surgical Technology Bridge Program - 5109093019

STN	100	Surgical Technology Fundamentals for Nurses	7
STN	101	Surgical Technology Lab for Nurses	1
STN	102	Surgical Technology Clinical for Nurses	6
STN	110	Surgical Technology Procedures for Nursing	4
		Total Credit Hours	**18**

Surveying and Mapping Technology

The curriculum is arranged for students to gain employment in surveying and mapping. It allows students to gain the educational requirements to sit for the licensing exams in the state of Kentucky. Classes emphasize solving problems encountered in the field of Surveying & Mapping Technology. Students perform routine topographical, boundary and other mapping / surveying projects, as well as Global Positioning (GPS) surveys. Students establish essential data, keep notes, develop preliminary sketches, and prepare working drawings, profile and section maps, volume calculations, and topographic maps. Students use computer mapping and coordinate geometry software to accomplish these tasks.

Associate in Applied Science

Surveying and Mapping Technology - 1511027029

(Offered at BSC)

ENG	101	Writing I	3
		Humanities	3
MAT	116	Technical Mathematics or	3
		Higher Level Quantitative Reasoning Course	(3)
		Natural Sciences	3
		Social/Behavioral Sciences	3
		Subtotal	**15**

Required Technical Courses

		Computer/Digital Literacy	3
COM	181	Basic Public Speaking	3
SMT	110	Principles of Surveying	3
SMT	130	Land Surveying Graphics	3
SMT	160	Construction Surveying	3
SMT	210	Advanced Surveying Measurement	3
SMT	220	Surveying Lab	3
SMT	230	Land Boundary Location	3
SMT	250	Mine Surveying	3
SMT	270	Professional Ethics and Conduct for Land Surveyors	3
SMT	290	Boundary Law	3
		Technical Electives Approved by Program Coordinator	12
		Subtotal	**45**
		AAS Total	**60**

Diploma

Surveying Technician III - 1511024019

(Offered at BSC)

Required General Education

ENG	101	Writing I	3
MAT	116	Technical Mathematics	3
		Subtotal	**6**

Required Technical Courses

		Computer/Digital Literacy	3
COM	181	Basic Public Speaking	3
SMT	110	Principles of Surveying	3
SMT	130	Land Surveying Graphics	3
SMT	160	Construction Surveying	3
SMT	210	Advanced Surveying Measurement	3
SMT	220	Surveying Lab	3
SMT	230	Land Boundary Location	3
		Technical Electives Approved by Program Coordinator	9
		Subtotal	**33**
		Diploma Total	**39**

Certificate

Surveying Technician II - 1511023029

(Offered at BSC, HZC, SEC)

		Computer/Digital Literacy	3
SMT	110	Principles of Surveying	3
SMT	130	Land Surveying Graphics	3
		Technical Electives Approved by Program Coordinator	3
		Certificate Total	**12**

Surveying Technician I - 1511023019

(Offered at BSC, HZC, SEC)

		Computer/Digital Literacy	3
SMT	110	Principles of Surveying, or	3
SMT	130	Land Surveying Graphics	(3)
		Certificate Total	**6**

Technical Theatre

The Technical Theatre Certificate will prepare students for an entry level position as a theatre technician and/or advanced technical theatre studies.

Certificates

Technical Theatre -5005013019

(Offered at OWC)

General Education Courses

THA	101	Introduction to Theatre: Principles and Practice	3
COM	181	Basic Public Speaking (OR)	3
COM	252	Intro to Interpersonal Communication (OR)	(3)
ENG	101	Writing I	(3)

Technical Core

THA	150	Fundamentals of Production	3
THA	250	Stage Electrics	3
THA	260	Stagecraft	3
THA	141	Costuming and Make-up for the Stage	3

Technical Electives (Select one of the following)

ART	113	3-Dimensional Design	3
ELT	110	Circuits I	5
DFT	102	Drafting Fundamentals	4
WLD	152	Basic Welding B	5
CAR	126/127	Introduction to Construction/Intro to Construction Lab	3/1
THA	192	Production Practicum	1
		Other courses as approved by the program coordinator	
		Total	**19-24**

Truck Driver Training

Prepares students to drive tractor trailer trucks, apply their knowledge of commercial driving regulations, prepare receipts for loads, maintain truck logs according to state and federal regulations, load and unload trucks, inspect trucks and their equipment. The Transportation Specialist certificate will also include the operation of basic heavy equipment in addition to the routine and minor maintenance and repairs on diesel engines.

Certificates

Tractor Trailer, CDLA I - 4902053010

(Offered at BSC, GTW, HPC, HZC, MYC, SMC,WKC)

TRU	100	Truck Driving	6
		Total Credits	**6**

Tractor Trailer, CDLA II - 4902053029

(Offered at JFC)

TNT	110	Basic Operations	3
TNT	120	Safe Operating Practices	3
TNT	210	Advanced Operating Practices	1
TNT	220	Vehicle Systems and Reporting Malfunction	3
TNT	250	Internship	4
		Total Credits	**14**

Tractor Trailer, CDLA III - 4902053039

(Offered at BSC)

TRK	110	Driver Preparation	3
TRK	120	Trucking Safety	3
TRK	130	Instrumentation	3
TRK	140	Systems Check	1
TRK	150	CDL Training	3
TRK	160	Combined Driving	2
TRK	216	Advanced Driver Preparation	1
TRK	220	Advanced Trucking Safety	3
TRK	230	Advanced Controls	1
TRK	240	System Inspections	1
TRK	250	Advanced CDL Preparation	1
TRK	260	Advanced Combined Driving	2
		Total Credits	**24**

Veterinary Technology

The Veterinary Technology program will provide students with the skills and knowledge needed to work as a professional veterinary technician. Areas of study include anatomy, physiology, microbiology, clinical techniques, office and hospital procedures, client relations and communication, pharmacology, anesthesiology, surgical and medical nursing, radiology and clinical pathology training. The Veterinary Technology program will provide students with "real world" clinical and lab experiences to develop the skills needed to become a valued professional in the field.

Note: Hours Exception (69-72 for the A.A.S.) approved by the KCTCS Board of Regents in June 2013.

Associate in Applied Science

Veterinary Technology - 5108087019

(Offered at OWC)

General Education

ENG	101	Writing I	3
PHI	110	Medical Ethics	3
MAT	110	Technical Mathematics OR	3
MAT	150	College Algebra	(3)
BIO	112	Introduction to Biology	3
BIO	113	Introduction to Biology Lab	1
		Social/Behavioral Sciences	3
COM	252	Introduction to Interpersonal Communication	3
		Subtotal	**19**

Required Technical Courses

		Digital Literacy	0-3
AGR	240	Introduction to Animal Science	3
AGR	280	Livestock Management	3
VET	110	Introduction to Veterinary Technology	5
VET	112	Veterinary Microbiology	4
VET	114	Animal Anatomy & Physiology	5
VET	120	Clinical Practicum I	2
VET	130	Veterinary Lab Procedures I	5
VET	210	Pharmacology	3
VET	220	Parasitology and Clinical Lab Techniques	5
VET	230	Veterinary Lab Procedures II	5
VET	240	Veterinary Lab Procedures III	5
VET	250	Clinical Practicum II	5
		Subtotal	**50-53**
		AAS Total	**69-72**

Visual Communication

Five programs are offered under the broader heading of Visual Communication. They are Communication Arts Technology, Design & Technology, Multimedia, Printing, and Visual Arts.

Visual Communication: Communication Arts Technology

The Communication Arts Technology program provides students with the knowledge, skills, and a portfolio needed for entry-level employment as a graphic designer, commercial photographer, web designer, videographer, or video editor. These fields involve the use of specialized software combined with creativity, design, and problem solving skills to communicate an effective visual message for TV, web and interactive media, product packaging, and advertising layout. This program focuses on developing the creativity and software skills necessary to be competitive in these fields. Many courses include hands-on lab hours with one-on-one assistance from the instructors. The program is completed with an internship in the student's specialty field that allows the student to transfer academic skills to a professional environment. Students and graduates of the Communication Arts Technology program have won numerous design, photography, and video awards in the creative industry.

Employment of graphic designers, photographers, web designers, videographers, and video editors is expected to grow as demand for their products continues to increase from advertisers, publishers, video production studios, and computer design firms. Graduates may be employed as graphic designers at newspapers, print shops, advertising agencies, photographic studios, multimedia shops, web design shops, television broadcasting stations, film and video production studios, department stores, corporations or non-profit agencies.

All technical courses must be completed with "C" (2.0) or greater to advance in Visual Communication programs.

Associate in Applied Science

Communication Arts Technology - 5004067019

(Offered at JFC)

General Education Requirements

ENG	101	Writing I	3
ART	106	Renaissance Through Modern Art History	3
MAT	110	Applied Mathematics OR	3
MAT	146	Contemporary College Mathematics OR	(3)
MAT	150	College Algebra	(3)
		Social/Behavioral Sciences	3
		Natural Sciences	3
		Total General Education Requirements	**15**

Core Communication Art Courses

VCC	150	Mac Basics OR any Computer/Digital Literacy equivalent*	0-3
VCC	100	Introduction to Visual Communication	3
ART	110	Drawing I	3
VCA	132	Illustration for Advertising	3
VCA	170	Advertising Design I	3
VCA	171	Advertising Design II	3
VCA	160	Commercial Photography I	3
VCA	161	Commercial Photography II	3
VCC	166	Photoshop Basics	3
		Subtotal	**24-27**
		Total Core Communication Arts Courses & Gen Ed	**39-42**

Advertising Design Track - 500406701

(Offered at JFC)

VCA	106	Creative Typographic Design	3
VCM	115	2-D Animation	3
VCM	220	Webpage Design	3
VCA	270	Advertising Design III	4
VCA	271	Advertising Design IV	4
VCA	290	Folio Seminar	3
VCA	298	Practicum	4
		Subtotal	**24**
		Total Credit Hours for Advertising Design Track	**63-66**

Commercial Photography Track - 500406702

(Offered at JFC)

VCC	266	Advanced Photoshop	3
VCM	115	2-D Animation	3
VCM	220	Webpage Design	3
VCA	260	Commercial Photography III	4
VCA	261	Commercial Photography IV	4
VCA	290	Folio Seminar	3
VCA	298	Practicum	4
		Subtotal	**24**
		Total Credit Hours for Commercial Photography Track	**63-66**

Digital Filmmaking Track - 500406703

(Offered at JFC)

ENG	207	Beginning Workshop in Imaginative Writing: Scriptwriting	3
MUS	120	Music Technology I	3
THA	126	Acting I: Fundamentals of Acting	3
VCA	151	Digital Filmmaking I	3
VCA	152	Digital Filmmaking II	3
VCA	251	Digital Filmmaking III	3
VCA	252	Digital Filmmaking IV	3
VCA	290	Folio Seminar	3
VCA	298	Practicum	2
		Subtotal	**26**
		Total Credit Hours for Digital Filmmaking Track	**65-68**

Webpage Design Track -500406704

(Offered at JFC)

VCC	205	Introduction to HTML OR	3
CIT	155	Web Page Development	(3)
VCM	220	Webpage Design	3
IMD	180	Intermediate Web Design	3
VCM	115	2D Animation	3
VCM	230	Advanced Webpage Design	3
CIT	140	JavaScript I	3
VCA	290	Folio Seminar	3
VCA	298	Practicum	4
		Subtotal	**25**
		Total Credit Hours for Webpage Design Track	**64-67**

*Either successfully passing computer competency exam or taking an approved computer/digital literacy course.

Certificates

Multimedia Certificate in Communication Arts - 5004063039

(Offered at JFC)

Technical or Support Courses

VCC	150	Mac Basics OR Computer/Digital Literacy Equivalent*	0-3
VCA	170	Advertising Design I	3
VCA	160	Commercial Photography I	3
VCA	171	Advertising Design II	3
VCM	115	2-D Animation	3
VCC	166	Photoshop Basics	3
VCM	220	Webpage Design	3
		Total Credits for MM Certificate in Communication Arts	**18-21**

Visual Communication: Design & Technology

Design & Technology emphasizes creative problem solving and insight into the mix of art, design and technical competence. This program includes a Graphic Design track, a Mixed Media Design track, and a Production Design track, with a core of courses common to all. The core includes general education components essential to a collegiate education and technical courses giving students an introduction to drawing, design concepts, and computer graphics. In addition to core courses, students will take specialty courses for their selected option. Students may also choose to receive a certificate in digital photography.

The Graphic Design option emphasizes several aspects of graphic design and focuses on the development of creativity and software skills necessary to be competitive in the field.

The Mixed Media Design option provides students with a mix of any courses within the visual communication program or approved electives that serves the interests and skills of the student.

The Production Design option provides students training in the operation of various print production and graphic production equipment. Students will learn skills to design and produce a wide variety of printed materials, promotional items, and signage.

Prospective employment opportunities are in advertising agencies, graphic design studios, news media, printing and signage companies, department stores, and other creative services departments and businesses, including web design and video production studios.

All technical courses must be completed with "C" (2.0) or greater to advance in all Visual Communication programs.

Associate in Applied Science

Design & Technology – 5004097019

(Offered at BSC)

General Education Requirements

MAT	110	Applied Mathematics OR	3
		Higher Level Quantitative Reasoning	(3)
		Natural Sciences	3
		Social/Behavioral Sciences	3
		Heritage/Humanities	3
ENG	101	Writing I	3
		Total General Education Requirements	**15**

Required Technical Core:

		Digital Literacy	0-3
VCC	100	Introduction to Visual Communication	3
VCC	106	Typography	3
VCA	105	Drawing Concepts OR	3
ART	110	Drawing I	(3)
VCA	108	Color Theory	3
VCC	110	Design Concepts	3
VCC	125	Computer Graphics I	3
VCA	280	Professional Portfolio Development	3
VCC	297	Internship OR	3
VCC	298	Practicum OR	(3)
COE	199	Cooperative Education	(3)
		Subtotal	**24-27**

Graphic Design Track – 500409701

(Offered at BSC)

VCC	260	Computer Graphics II	3
VCC	235	Graphic Design I	3
VCC	245	Graphic Design II	3
VCC	255	Emerging Media Design OR	3
		Approved Technical Elective	(3)
		Approved Technical Electives*	12
		Subtotal	**24**
		Total Credit Hours for AAS Graphic Design Track	**63-66**

Mixed Media Design Track – 500409705

(Offered at BSC)

		Approved Technical Electives*	24
		Subtotal	**24**
		Total Credit Hours for AAS Interactive Design Track	**63-66**

Production Design Track – 500409703

(Offered at BSC)

VCC	214	Production Design I	3
VCC	216	Production Design II	3
VCC	218	Production Design III	3
		Approved Technical Electives*	15
		Subtotal	**24**
		Total Credits for AAS Production Design Track	**63-66**

*Approved Technical Electives include any VCA, VCC, or VCM course and the following IMD courses: IMD 133, IMD 180, IMD 230, IMD 232, IMD 240, IMD 250, IMD 255, and IMD 258.

Diplomas

Graphic Design - 5004094059

(Offered at BSC)

Required General Education

	Written Communication OR	3
	Oral Communications OR	(3)
	Humanities/Heritage	(3)
	Quantitative Reasoning OR	3
	Natural Sciences OR	(3)
	Social/Behavioral Sciences	(3)
	Subtotal	**6**

Required Technical Core:

		Digital Literacy	0-3
VCC	100	Introduction to Visual Communication	3
VCC	106	Typography	3
VCA	105	Drawing Concepts OR	3
ART	110	Drawing I	(3)
VCA	108	Color Theory	3
VCC	110	Design Concepts	3
VCC	125	Computer Graphics I	3
VCA	280	Professional Portfolio Development	3
VCC	297	Internship OR	3
VCC	298	Practicum OR	(3)
COE	199	Cooperative Education	(3)
		Subtotal	**24–27**

Graphic Design Track – 500409401

(Offered at BSC)

VCC	260	Computer Graphics II	3
VCC	235	Graphic Design I	3
VCC	245	Graphic Design II	3
VCC	255	Emerging Media Design OR	3
		Approved Technical Elective	(3)
		Approved Technical Electives*	12
		Subtotal	**24**
		Total Credits for Graphic Design Track Diploma	**54–57**

Mixed Media Design Track – 500409402

(Offered at BSC)

		Approved Technical Electives*	24
		Subtotal	**24**
		Total Credits for Mixed Media Design Track Diploma	**54–57**

Production Design Track– 500409403

(Offered at BSC)

VCC	214	Production Design I	3
VCC	216	Production Design II	3
VCC	218	Production Design III	3
		Approved Technical Electives*	15
		Subtotal	**24**
		Total Credits for Production Design Track Diploma	**54–57**

*Approved Technical Electives include any VCA, VCC, or VCM course and the following IMD courses: IMD 133, IMD 180, IMD 230, IMD 232, IMD 240, IMD 250, IMD 255, and IMD 258.

Certificates

Design Assistant – 5004093019

(Offered at BSC,WKC)

VCC	100	Introduction to Visual Communication	3
VCC	106	Typography	3
VCA	105	Drawing Concepts OR	3
ART	110	Drawing I	(3)
VCA	108	Color Theory	3
VCC	110	Design Concepts	3
VCC	125	Computer Graphics I	3
		Total Credits for Design Assistant Certificate	**18**

Digital Photography – 5004093069

(Offered at BSC, SMC,WKC)

VCA	108	Color Theory	3
VCA	120	Digital Photography I	3
VCC	166	Photoshop Basics	3
VCA	131	Digital Photography II OR	3
VCC	266	Advanced Photoshop	(3)
		Total Credits for Digital Photography Certificate	**12**

Mixed Media Design Assistant – 5004093099

(Offered at BSC)

VCC	100	Introduction to Visual Communication	3
VCC	110	Design Concepts	3
VCC	125	Computer Graphics I	3
		Approved Technical Electives*	9
		Total Credits for Mixed Media Design Assistant Certificate	**18**

Production Design Assistant –5004093109

(Offered at BSC,WKC)

VCC	100	Introduction to Visual Communication	3
VCC	110	Design Concepts	3
VCC	125	Computer Graphics I	3
VCC	214	Production Design I OR	3
VCC	216	Production Design II OR	(3)
VCC	218	Production Design III	(3)
		Total Credits for Production Design Assistant Certificate	**12**

*Approved Technical Electives include any VCA, VCC, or VCM courses, and the following IMD courses: IMD 133, IMD 180, IMD 230, IMD 232, IMD 240, IMD 250, IMD 255, and IMD 258.

Visual Communication: Multimedia

The Visual Communication: Multimedia program provides students the necessary skills to prepare and produce a wide variety of multimedia presentations. This program includes tracks in Animation, Web Design, Digital Design, Video Production, and Multimedia. The core includes general education components essential to a collegiate education and technical courses giving students an introduction to typography, design concepts, color theory, and computer graphics. In addition to core courses, students will take specialty courses for their selected track.

Prospective employment opportunities are in advertising agencies, graphic design studios, news media, printing and signage companies, department stores, and other creative services departments and businesses, including web design and video production studios.

All technical courses must be completed with "C" (2.0) or greater to advance in all Visual Communication programs.

Associate in Applied Science

Multimedia - 1003047019

(Offered at HZC, SMC,WKC)

General Education Requirements:

		Quantitative Reasoning	3
		Natural Sciences	3
		Social/Behavioral Sciences	3
		Heritage/Humanities	3
ENG	101	Writing I	3
		Subtotal	**15**

Technical Core

VCC	100	Introduction to Visual Communication	3
VCC	106	Typography	3
VCA	108	Color Theory	3
VCC	110	Design Concepts	3
VCC	125	Computer Graphics I	3
VCC	150	Mac Basics or	3
		Digital Literacy course	(3)
VCC	166	Photoshop Basics	3
VCC	200	Computer Illustration	3
VCC	270	Acrobat Basics	3
VCA	280	Professional Portfolio Development	3
VCC	297	Internship OR	3
VCC	298	Practicum OR	(3)
COE	199	Cooperative Education	3
		Subtotal	**33**

Animation Track - 100304701

(Offered at WKC)

VCC	255	Emerging Media Design	3
VCM	115	2-D Animation	3
VCM	210	3-D Animation	3
VCM	215	After Effects	3
VCM	225	Advanced 3-D Animation	3
		Approved Technical Electives	3
		Subtotal	**18**

Total Credits for AAS:
Multimedia - Animation Track **66**

Web Design Track - 100304702

(Offered at HZC,WKC)

VCC	255	Emerging Media Design	3
VCM	115	2-D Animation	3
VCM	220	Webpage Design	3
VCM	230	Advanced Webpage Design	3
		Approved Technical Electives	6
		Subtotal	**18**

Total Credits for AAS:
Multimedia - Web Design Track **66**

Digital Design Track - 100304703

(Offered at WKC)

VCC	210	Advanced Computer Illustration	3
VCC	220	InDesign Basics	3
VCC	266	Advanced Photoshop	3
		Approved Technical Electives	9
		Subtotal	**18**

Total Credits for AAS:
Multimedia - Digital Design **Track 66**

Video Production Track - 100304705

(Offered at HZC,WKC)

VCC	255	Emerging Media Design	3
VCM	115	2-D Animation	3
VCM	125	Foundations of Video Production	3
VCM	140	Digital Video	3
VCM	215	After Effects	3
VCM	240	Advanced Digital Video	3
		Subtotal	**18**

Total Credits for AAS:
Multimedia - Video Production Track **66**

Multimedia Track – 100304706

(Offered at HZC,WKC)

VCC	220	InDesign Basics	3
VCC	266	Advanced Photoshop	3
VCC	255	Emerging Media Design	3
VCM	115	2-D Animation	3
VCM	140	Digital Video	3
VCM	220	Webpage Design	3
		Subtotal	**18**

Total Credits for AAS:
Multimedia – Multimedia Track **66**

Diploma

Multimedia - 1003044019

(Offered at WKC)

General Education Requirements

		Written Communication OR	3
		Oral Communications OR	(3)
		Humanities/Heritage	(3)
		Quantitative Reasoning OR	3
		Natural Sciences OR	(3)
		Social/Behavioral Sciences	(3)
		Subtotal	**6**

Technical or Support Courses

VCC	100	Introduction to Visual Communication	3
VCC	106	Typography	3
VCA	108	Color Theory	3
VCC	110	Design Concepts	3
VCC	125	Introduction to Computer Graphics	3
VCC	150	Mac Basics OR	3
		Digital Literacy course	(3)
VCC	166	Photoshop Basics	3
VCC	200	Computer Illustration	3
VCC	270	Acrobat Basics	3
VCA	280	Professional Portfolio Development	3
VCC	297	Internship OR	(3)
VCC	298	Practicum	(3)
COE	199	Cooperative Education OR	3
		Subtotal	**33**

Animation Track - 100304403

(Offered at WKC)

VCC	255	Emerging Media Design	3
VCM	115	2-D Animation	3
VCM	210	3-D Animation	3
VCM	215	After Effects	3
VCM	225	Advanced 3-D Animation	3
		Technical Elective	3
		Subtotal	**18**

Total for Animation Track **57**

Web Design Track - 100304402

(Offered at WKC)

VCC	255	Emerging Media Design	3
VCM	115	2-D Animation	3
VCM	220	Webpage Design	3
VCM	230	Advanced Webpage Design	3
		Approved Technical Electives	6
		Subtotal	**18**

Total for Web Design Track **57**

Digital Design Track - 100304404

(Offered at WKC)

VCC	210	Advanced Computer Illustration	3
VCC	220	InDesign Basics	3
VCC	266	Advanced Photoshop	3
		Approved Technical Electives	9
		Subtotal	**18**
		Total for Digital Design Diploma	**57**

Video Production Track - 100304406

(Offered at WKC)

VCC	255	Emerging Media Design	3
VCM	115	2-D Animation	3
VCM	125	Foundations of Video Production	3
VCM	140	Digital Video	3
VCM	215	After Effects	3
VCM	240	Advanced Digital Video	3
		Subtotal	**18**
		Total for Audio/Video Track	**57**

Multimedia Track - 100304401

(Offered at WKC)

VCC	220	InDesign Basics	3
VCC	266	Advanced Photoshop	3
VCC	255	Emerging Media Design	3
VCM	115	2-D Animation	3
VCM	140	Digital Video	3
VCM	220	Webpage Design	3
		Subtotal	**18**
		Total Credits for Multimedia Track	**57**

Certificates

Animation - 1003043029

(Offered at JFC, SMC,WKC)

VCC	100	Introduction to Visual Communication	3
VCC	106	Typography	3
VCA	108	Color Theory	3
VCC	110	Design Concepts	3
VCC	125	Computer Graphics I	3
VCC	150	Mac Basics OR	3
		Digital Literacy course	(3)
VCC	166	Photoshop Basics	3
VCM	115	2-D Animation	3
VCM	210	3-D Animation	3
VCM	215	After Effects	3
		Total	**30**

Web Design - 1003043039

(Offered at BSC, HZC, JFC, SMC,WKC)

VCC	100	Introduction to Visual Communication	3
VCC	110	Design Concepts	3
VCC	106	Typography	3
VCA	108	Color Theory	3
VCC	150	Mac Basics OR	3
		Digital Literacy course	(3)
VCC	166	Photoshop Basics	3
VCC	200	Computer Illustration	3
VCM	115	2-D Animation	3
VCM	220	Webpage Design	3
VCM	230	Advanced Webpage Design	3
		Total	**30**

Digital Design - 1003043059

(Offered at WKC)

VCC	100	Introduction to Visual Communication	3
VCC	110	Design Concepts	3
VCC	1063	Typography	3
VCA	108	Color Theory	3
VCC	150	Mac Basics OR	3
		Digital Literacy course	(3)
VCC	166	Photoshop Basics	3
VCC	200	Computer Illustration	3
VCC	220	InDesign Basics	3
		Approved Technical Electives	6
		Total	**30**

Video Production- 1003043069

(Offered at HZC,WKC)

VCC	100	Introduction to Visual Communication	3
VCC	110	Design Concepts	3
VCC	150	Mac Basics OR	3
		Digital Literacy course	(3)
VCC	166	Photoshop Basics	3
VCM	115	2-D Animation	3
VCM	125	Foundations of Video Production	3
VCM	140	Digital Video	3
VCM	215	After Effects	3
VCM	240	Advanced Digital Video	3
		Approved Technical Elective	3
		Total	**30**

Multimedia - 1003043019

(Offered at HZC, JFC,WKC)

VCA	108	Color Theory	3
VCC	100	Introduction to Visual Communication	3
VCC	110	Design Concepts	3
VCC	125	Introduction to Computer Graphics	3
VCC	150	Mac Basics OR	3
		Digital Literacy course	(3)
VCC	166	Photoshop Basics	3
VCC	200	Computer Illustration	3
VCM	115	2-D Animation	3
VCM	140	Digital Video	3
VCM	220	Webpage Design	3
Total	30		

Visual Communication: Printing

Printing is an option under the broader heading of Visual Communication. The Digital Production Artist curriculum emphasizes technical competence to better prepare students for successful careers in designing and preparing artwork for the print media. Laboratory experiences in page layout, computer illustration, photo imaging, and PDF files are combined with foundation courses in design. All technical courses must be completed with 'C' (2.0) or greater to advance in all Visual Communication programs.

Associate in Applied Science

Printing - 1003017019

General Education Requirements

MAT	110	Applied Mathematics OR	3
		Higher Level Quantitative Reasoning	(3)
		Natural Sciences	3
		Social/Behavioral Sciences	3
		Heritage/Humanities	3
ENG	101	Writing I	3
		Subtotal	**15**

Required Core:

		Digital Literacy	0-3
VCA	108	Digital Color Theory	3
VCA	120	Digital Photography	3
VCC	100	Introduction to Visual Communication	3
VCC	105	Fundamentals of Typography	3
VCC	166	Photoshop Basics	3
VCC	200	Computer Illustration	3
VCC	220	InDesign Basics	3
VCC	230	Advanced InDesign Basics	3
VCC	266	Advanced Photoshop	3
VCC	270	Acrobat Basics	3
VCP	285	Electronic Prepress	3
COE	199	Cooperative Education OR	3
VCC	297	Internship OR	(3)
VCC	298	Practicum	(3)
		Instructor Approved Electives	9
		Subtotal	**45-48**
		Total for AAS Visual Communication: Printing-Digital Production Artist	**60-63**

Diplomas

Digital Production Artist - 1003014019

(Offered at BSC, JFC, SMC)

General Education Requirements

		Written Communication OR	3
		Oral Communications OR	(3)
		Humanities/Heritage	(3)
		Quantitative Reasoning OR	3
		Natural Sciences	(3)
		Social/Behavioral Sciences	(3)
		Subtotal	**6**

Technical or Support Courses

		Digital Literacy	0-3
VCA	108	Digital Color Theory	3
VCA	120	Digital Photography	3
VCC	100	Introduction to Visual Communication	3
VCC	105	Fundamentals of Typography	3
VCC	166	Photoshop Basics	3
VCC	200	Computer Illustration	3
VCC	220	InDesign Basics	3
VCC	230	Advanced InDesign	3
VCC	266	Advanced Photoshop	3
VCC	270	Acrobat Basics	3
VCP	285	Electronic Prepress	3
COE	199	Cooperative Education OR	3
VCC	297	Internship OR	(3)
VCC	298	Practicum	(3)
		Approved Electives	6
		Subtotal	**42-45**
		Total for Digital Production Artist Diploma	**48-51**

Certificates

Digital Production Assistant - 1003013019

(Offered at BSC, JFC, SMC,WKC)

Technical or Support Courses

VCC	100	Introduction to Visual Communication	3
VCC	105	Fundamentals of Typography and Design	3
VCC	166	Photoshop Basics	3
VCC	220	InDesign Basics	3
		Approved Elective	3
		Total	**15**

Digital Imaging Assistant - 1003013059

(Offered at BSC, SMC,WKC)

Technical or Support Courses

VCC	166	Photoshop Basics	3
VCA	120	Digital Photography	3
		Approved Electives	6
		Total	**12**

Visual Communication: Visual Arts

Students desiring certificates in two-dimensional arts (such as painting or photography), or three-dimensional arts (such as sculpture or ceramics), may select this avenue and/or may participate in the full degree concurrently. The certificates are designed to meet the needs of the many non-traditional and part-time students and artisans of Kentucky. The certificate option will also help introduce the program to students who are not immediately willing to commit to a degree program but whom still desire professional training in the visual arts.

Certificates

2-Dimensional Studies - 5007063019

(Offered at JFC)

ART	110	Drawing I	3
ART	112	2-Dimensional Design	3
ART	105	Ancient through Medieval Art History OR	3
ART	106	Renaissance through Modern Art History OR Approved Art History Course	
		2-Dimensional Art Electives	9
		Total 2-Dimensional Studies Certificate	**18**

3-Dimensional Studies - 5007063029

(Offered at JFC)

ART	110	Drawing I	3
ART	113	3-Dimensional Design	3
ART	105	Ancient through Medieval Art History OR	3
ART	106	Renaissance through Modern Art History OR Approved Art History Course	
		3-Dimensional Art Electives	9
		Total 3-Dimensional Studies Certificate	**18**

Volumetric Medical Imaging

The Volumetric Medical Imaging (VMI) Certificate is designed for students who are certified radiologic technologists. Students will learn to identify anatomical features in cross section and volume, reconstruct volumetric data from 2D radiological data, recognize pathologic anatomy and manipulate volumes for physicians to review. Graduates will be qualified to seek employment in radiology departments of hospitals or with private companies who contract this service. Academic Program Coordinator permission is required to enter the certificate program. Prerequisites: Basic computer literacy, such as CIS 100 or equivalent, BIO 137, 139.

Certificate

Volumetric Medical Imaging - 5109113019

(Offered at JFC)

BIO	137	Human Anatomy and Physiology I*	4
BIO	139	Human Anatomy and Physiology II*	4
VMI	200	Sectional Anatomy & Pathology I	4
VMI	201	Sectional Anatomy & Pathology II	4
VMI	210	Volumetric Medical Imaging I	4
VMI	211	Volumetric Medical Imaging II	4
		Total Credits	**24**

*BIO 137&139 must have been completed within the last 10 years.

Welding Technology

The Welding Technology Program is dedicated to welding education, technology and student success. Students in this program will learn various welding techniques, careers and the skills needed to be successful in the Welding Technology field. Welding occupations are primarily concerned with joining, surfacing, or repairing structures or parts made of metal or other weldable materials. The skills and knowledge needed to determine the appropriate welding technique required for a specific project and to successfully perform that technique are gained through course work and practical experience. The program offers a wide range of credentials including the Associate in Applied Science Degree, Diploma, and eleven certificates in Welding Technology.

Associate in Applied Science

Welding Technology - 4805087019

(Offered at BLC, BSC, ELC, JFC, OWC, SKY)

ENG	101	Writing I	3
MAT	110	Applied Mathematics OR	3
MAT	116	Technical Mathematics OR	(3)
MAT	146	Contemporary College Mathematics OR	(3)
MAT	150	College Algebra OR	(3)
MA	109	College Algebra	(3)
		Heritage/Humanities	3
		Natural Sciences OR	3
		Recommended courses of:	
PHY	151	Introductory Physics I AND	(3)
PHY	161	Introductory Physics Lab I	(1)
PSY	110	General Psychology OR	3
SOC	101	Introduction to Sociology	(3)
COM	252	Introduction to Interpersonal Communication OR	3
COM	181	Basic Public Speaking	(3)
		General Education Total Credits	**18-19**

Required

		Computer/Digital Literacy	0-3
WLD	100	Oxy-Fuel Systems OR	2
WLD	110	Cutting Processes	(2)
WLD	101	Oxy-Fuel Systems Lab OR	2
WLD	111	Cutting Processes Lab	(3)
WLD	120	Shielded Metal Arc Welding (SMAW)	2
WLD	121	Shielded Metal Arc Welding (SMAW) Fillet Lab	3
WLD	123	Shielded Metal Arc Welding (SMAW) Groove with Backing Lab OR	3
WLD	225	Shielded Metal Arc Welding (SMAW) Open Groove Lab	(3)
WLD	130	Gas Tungsten Arc Welding (GTAW)	2
WLD	131	Gas Tungsten Arc Welding (GTAW) Fillet Lab	3
WLD	133	Gas Tungsten Arc Welding (GTAW) Groove Lab	3
WLD	140	Gas Metal Arc Welding (GMAW)	2
WLD	141	Gas Metal Arc Welding (GMAW) Fillet Lab	3
WLD	143	Gas Metal Arc Welding (GMAW) Groove Lab	3
WLD	170	Blueprint Reading for Welding	2
WLD	171	Blueprint Reading for Welding Lab	3
WLD	220	Welding Certification	2
WLD	221	Welding Certification Lab	3
WLD	298	Welding Practicum OR	1 - 4
WLD	299	Cooperative Work Experience	(1- 4)
		Technical Electives	3
		Subtotal	**42 - 49**
		Total Credits	**60 – 68**

NOTE: Computer/Digital literacy must be demonstrated either by competency exam or by successfully completing a computer/digital literacy course.

Diploma

Combination Welder - 4805084029

(Offered at ASC, BLC, BSC, ELC, GTW, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

ENG	101	Writing I OR	3
TEC	200	Technical Communications	(3)
MAT	110	Applied Mathematics OR	3
MAT	116	Technical Mathematics OR	(3)
MAT	146	Contemporary College Mathematics OR	(3)
MAT	150	College Algebra OR	(3)
MA	109	College Algebra	(3)
		General Education Total Credits	**6**

NOTE: Computer/Digital literacy must be demonstrated either by competency exam or by successfully completing a computer/digital literacy course.

Required

		Computer/Digital Literacy	0-3
WLD	100	Oxy-Fuel Systems OR	2
WLD	110	Cutting Processes	(2)
WLD	101	Oxy-Fuel Systems Lab OR	2
WLD	111	Cutting Processes Lab	(3)
WLD	120	Shielded Metal Arc Welding (SMAW)	2
WLD	121	Shielded Metal Arc Welding (SMAW) Fillet Lab	3
WLD	123	Shielded Metal Arc Welding (SMAW) Groove with Backing Lab OR	3
WLD	225	Shielded Metal Arc Welding (SMAW) Open Groove Lab	(3)
WLD	130	Gas Tungsten Arc Welding (GTAW)	2
WLD	131	Gas Tungsten Arc Welding (GTAW) Fillet Lab	3
WLD	133	Gas Tungsten Arc Welding (GTAW) Groove Lab	3
WLD	140	Gas Metal Arc Welding (GMAW)	2
WLD	141	Gas Metal Arc Welding (GMAW) Fillet Lab	3
WLD	143	Gas Metal Arc Welding (GMAW) Groove Lab	3
WLD	170	Blueprint Reading for Welding	2
WLD	171	Blueprint Reading for Welding Lab	3
WLD	220	Welding Certification	2
WLD	221	Welding Certification Lab	3
WLD	298	Welding Practicum OR	1-4
WLD	299	Cooperative Work Experience	(1-4)
		Technical Elective	2-3
		Subtotal	**41-49**
		Total Credits	**47-55**

***Technical Electives:**

WPP	200	Workplace Principles	3
WLD	151	Basic Welding A	2
WLD	161	Submerged Arc Welding Lab	1
WLD	181	Advanced Welding Systems Lab	1
WLD	191	Plasma Arc Welding Systems Lab	1
WLD	147	Flux Cored Arc Welding Lab	1
WLD	145	Gas Metal Arc Welding Aluminum Lab	1
WLD	251	Welding Automation Lab	1
WLD	253	Pipe Fitting and Template Development Lab	1
WLD	229	Shielded Metal Arc Welding Pipe Lab B	3
WLD	239	Orbital Tube Welding	1
WLD	240	Materials Technology	2
BEX	100	Basic Electricity for Non-Majors	3
BEX	101	Basic Electricity Lab for Non-Majors	2
FEX	100	Fundamentals of Electricity for Non-Majors	3

*This list is not all inclusive. Other courses may be approved at the discretion of the program coordinator.

Certificates

Welder Helper - 4805083129

(Offered at ASC, BLC, BSC, ELC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

WLD	151	Basic Welding A OR	2
WLD	120	Shielded Metal Arc Welding (SMAW) AND	(2)
WLD	121	Shielded Metal Arc Welding (SMAW) Fillet Lab OR	(3)
WLD	130	Gas Tungsten Arc Welding (GTAW) AND	(2)
WLD	131	Gas Tungsten Arc Welding (GTAW) Fillet Lab OR	(3)
WLD	140	Gas Metal Arc Welding (GMAW) AND	(2)
WLD	141	Gas Metal Arc Welding (GMAW) Fillet Lab OR	(3)
WLD	152	Basic Welding B OR	(5)
IMT	100	Welding for Maintenance AND	(3)
IMT	101	Welding for Maintenance Lab	(2)
		Total Credits	**2-5**

Gas Welder - 4805083039

(Offered at ASC, BLC, BSC, ELC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

WLD	100	Oxy-Fuel Systems	2
WLD	101	Oxy-Fuel Systems Lab	2
		Total Credits	**4**

ARC Cutter - 4805083099

(Offered at ASC, BLC, BSC, ELC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SMC, WKC)

WLD	110	Cutting Processes	2
WLD	111	Cutting Processes Lab	3
		Total Credits	**5**

Tack Welder - 4805083119

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

WLD	170	Blueprint Reading for Welding	2
WLD	171	Blueprint Reading for Welding Lab	3
WLD	151	Basic Welding A OR	2
WLD	120	Shielded Metal Arc Welding (SMAW) AND	(2)
WLD	121	Shielded Metal Arc Welding (SMAW) Fillet Lab OR	(3)
WLD	130	Gas Tungsten Arc Welding (GTAW) AND	(2)
WLD	131	Gas Tungsten Arc Welding (GTAW) Fillet Lab OR	(3)
WLD	140	Gas Metal Arc Welding (GMAW) AND	(2)
WLD	141	Gas Metal Arc Welding (GMAW) Fillet Lab OR	(3)
WLD	152	Basic Welding B	(5)
		Total Credits	**7-10**

Production Line Welder - 4805083059

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

WLD	130	Gas Tungsten Arc Welding (GTAW)	2
WLD	131	Gas Tungsten Arc Welding (GTAW) Fillet Lab	3
WLD	140	Gas Metal Arc Welding (GMAW)	2
WLD	141	Gas Metal Arc Welding (GMAW) Fillet Lab	3
WLD	100	Oxy-Fuel Systems OR	2
WLD	110	Cutting Processes	(2)
WLD	101	Oxy-Fuel Systems Lab OR	2
WLD	111	Cutting Processes Lab	(3)
WLD	120	Shielded Metal Arc Welding (SMAW)	2
WLD	121	Shielded Metal Arc Welding (SMAW) Fillet Lab	3
		Total Credits	**19-20**

ARC Welder - 4805083029

(Offered at ASC, BLC, BSC, ELC, GTW, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

WLD	100	Oxy-Fuel Systems OR	2
WLD	110	Cutting Processes	(2)
WLD	101	Oxy-Fuel Systems Lab OR	2
WLD	111	Cutting Processes Lab	(3)
WLD	120	Shielded Metal Arc Welding (SMAW)	2
WLD	121	Shielded Metal Arc Welding (SMAW) Fillet Lab OR	3
WLD	123	Shielded Metal Arc Welding (SMAW) Groove with Backing Lab OR	(3)
WLD	225	Shielded Metal Arc Welding (SMAW) Open Groove Lab	(3)
WLD	130	Gas Tungsten Arc Welding (GTAW)	2
WLD	131	Gas Tungsten Arc Welding (GTAW) Fillet Lab OR	3
WLD	133	Gas Tungsten Arc Welding (GTAW) Groove Lab	(3)
WLD	140	Gas Metal Arc Welding (GMAW)	2
WLD	141	Gas Metal Arc Welding (GMAW) Fillet Lab OR	3
WLD	143	Gas Metal Arc Welding (GMAW) Fillet Groove Lab	(3)
WLD	170	Blueprint Reading for Welding	2
WLD	171	Blueprint Reading for Welding Lab	3
		Total	**24–25**

Pipeline Welder - 4805083109

(Offered at ASC, BLC, BSC, ELC, HZC, JFC, MDC, MYC, OWC, SEC, SMC,WKC)

WLD	100	Oxy-Fuel Systems OR	2
WLD	110	Cutting Processes	(2)
WLD	101	Oxy-Fuel Systems Lab OR	2
WLD	111	Cutting Processes Lab	(3)
WLD	120	Shielded Metal Arc Welding (SMAW)	2
WLD	130	Gas Tungsten Arc Welding (GTAW)	2
WLD	140	Gas Metal Arc Welding (GMAW)	2
WLD	170	Blueprint Reading for Welding	2
WLD	171	Blueprint Reading for Welding Lab	3
WLD	220	Welding Certification	2
WLD	221	Welding Certification Lab	3
WLD	227	Shielded Metal Arc Welding (SMAW) Pipe Lab A	3
WLD	235	Gas Tungsten Arc Welding (GTAW) Pipe Lab A	3
WLD	245	Gas Metal Arc Welding (GMAW) Pipe Lab A	3
Recommended Electives:			
WLD	229	Shielded Metal Arc Welding (SMAW) Pipe Lab B	(3)
WLD	237	Gas Tungsten Arc Welding (GTAW) Pipe Lab B	(3)
WLD	247	Gas Metal Arc Welding (GMAW) Pipe Lab B	(3)
WLD	253	Pipe Fitting and Template Development Lab	(1)
		Total	**29-40**

AWS National Skills Standards Level I - 4805083089

(Offered at ASC, BLC, BSC, ELC, HEC, HPC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

WLD	100	Oxy-Fuel Systems OR	2
WLD	110	Cutting Processes	(2)
WLD	101	Oxy-Fuel Systems Lab OR	2
WLD	111	Cutting Processes Lab	(3)
WLD	120	Shielded Metal Arc Welding (SMAW)	2
WLD	121	Shielded Metal Arc Welding (SMAW) Fillet Lab	3
WLD	123	Shielded Metal Arc Welding (SMAW) Groove with Backing Lab OR	3
WLD	225	Shielded Metal Arc Welding (SMAW) Open Groove Lab	(3)
WLD	130	Gas Tungsten Arc Welding (GTAW)	2
WLD	131	Gas Tungsten Arc Welding (GTAW) Fillet Lab	3
WLD	133	Gas Tungsten Arc Welding (GTAW) Groove Lab	3
WLD	140	Gas Metal Arc Welding (GMAW)	2
WLD	141	Gas Metal Arc Welding (GMAW) Fillet Lab	3
WLD	143	Gas Metal Arc Welding (GMAW) Fillet Groove Lab	3
WLD	170	Blueprint Reading for Welding	2
WLD	171	Blueprint Reading for Welding Lab	3
		Total	**33–34**

Shielded Metal Arc Welding - 4805083139

(Offered at BLC, BSC, HEC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

WLD	120	Shielded Metal Arc Welding (SMAW)	2
WLD	121	Shielded Metal Arc Welding (SMAW) Fillet Lab	3
WLD	123	Shielded Metal Arc Welding (SMAW) Groove with Backing Lab OR	3
WLD	225	Shielded Metal Arc Welding (SMAW) Open Groove Lab	(3)
WLD	170	Blueprint Reading for Welding	2
WLD	171	Blueprint Reading for Welding Lab	3
WLD	100	Oxy-Fuel Systems OR	2
WLD	110	Cutting Process	(2)
WLD	101	Oxy-Fuel Systems Lab OR	2
WLD	111	Cutting Processes Lab	(3)
		Total	**17-18**

Gas Metal Arc Welding - 4805083149

(Offered at BLC, BSC, ELC, HEC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC, WKC)

WLD	140	Gas Metal Arc Welding (GMAW)	2
WLD	141	Gas Metal Arc Welding (GMAW) Fillet Lab	3
WLD	143	Gas Metal Arc Welding (GMAW) Groove Lab OR	3
WLD	245	Gas Metal Arc Welding (GMAW) Pipe Lab A OR	(3)
WLD	147	Flux Cored Arc Welding (FCAW) Lab	(1)
WLD	170	Blueprint Reading for Welding	2
WLD	171	Blueprint Reading for Welding Lab	3
WLD	100	Oxy-Fuel Systems OR	2
WLD	110	Cutting Process	(2)
WLD	101	Oxy-Fuel Systems Lab OR	2
WLD	111	Cutting Processes Lab	(3)
		Total	**15-18**

Gas Tungsten Arc Welding - 4805083159

(Offered at BLC, BSC, HEC, HZC, JFC, MDC, MYC, OWC, SEC, SKY, SMC,WKC)

WLD	130	Gas Tungsten Arc Welding (GTAW)	2
WLD	131	Gas Tungsten Arc Welding (GTAW) Fillet Lab	3
WLD	133	Gas Tungsten Arc Welding (GTAW) Groove Lab OR	3
WLD	235	Gas Tungsten Arc Welding (GTAW) Pipe Lab A	(3)
WLD	170	Blueprint Reading for Welding	2
WLD	171	Blueprint Reading for Welding Lab	3
WLD	100	Oxy-Fuel Systems OR	2
WLD	110	Cutting Process	(2)
WLD	101	Oxy-Fuel Systems Lab OR	2
WLD	111	Cutting Processes Lab	(3)
		Total	**17-18**

Women's and Gender Studies

The Women's and Gender Studies Certificate Program provides an interdisciplinary approach that engages students Win exploring and understanding historical and contemporary social issues with a focus on gender. The courses will require students to read, write, and think critically about such issues as identity, sexuality, the media, family, violence, health care, employment/discrimination, political structures, the intersection of gender, race, and poverty and the representation and participation of women on the world stage in artistic and socio-political spheres.

Certificate

Women's and Gender Studies – 0502073019

(Offered at JFC)

WGS	200	Introduction to Women's and Gender Studies in the Social Sciences OR	3
WGS	201	Introduction to Women's and Gender Studies in the Arts and Humanities	(3)
HIS	266	History of American Women to 1920 OR	3
HIS	267	History of American Women from 1920 OR	(3)
HIS	265	History of Women in America	(3)
		Electives (Selected from the following list or by consent of instructor)	6
		Total Credits	**12**

Note: HIS 265 satisfies general education and cultural studies requirements. HIS 266 and HIS 267 do not meet general education nor cultural studies requirements.

Women's and Gender Studies Electives: (Required: 6 credits)

ANT	160	Cultural Diversity in the Modern World	3
ANT	220	Introduction to Cultural Anthropology	3
BIO	120	Human Ecology	3
COM	299	Special Topics in Communication: Gender and Communication	3
ENG	233	Literature and Identities: (Sexuality & Representation)	3
ENG	232	Literature and Place (Sub-topic required)	3
ENG	234	Introduction to Women's Literature	3
FAM	253	Human Sexuality: Development, Behavior, and Attitudes	3
FLK	276	Introduction to Folk Studies	3
FLK	280	Cultural Diversity in the United States	3
GEO	160	Lands and Peoples of the Non-Western World	3
GEO	240	Geography and Gender	3
HIS	265	History of Women in America	3
HIS	266*	History of American Women to 1920*	3
HIS	267*	History of American Women from 1920*	3
HUM	121	Peace Studies	3
PHI	130	Ethics	3
PHI	110	Medical Ethics	3
REL	101	Introduction to Religious Studies	3
SOC	235	Inequality in Society	3
SWK	275	The Family	3
WGS	200*	Introduction to Women's and Genders Studies in the Social Sciences* (if not taken as core)	3
WGS	201*	Introduction to Women's and Gender Studies in the Arts and Humanities* (if not taken as core)	3
		Total Credits	**12**

Workplace Safety Specialist

The Workplace Safety Specialist Certificate is designed to prepare and provide a well-rounded base of knowledge essential for success in carrying out effective safety programs for today's workforce. Professionals who are seeking or are new to safety management occupations are introduced to health and safety regulating agencies, their rules and regulations, compliance standards as well as the personal and professional skills required to administrate safety programs.

Certificate

Workplace Safety Specialist – 1507993010

(Offered at MYC, SEC)

		Oral Communications	3
		Digital Literacy	0-3
BAS	288	Personal and Organizational Leadership	3
HSM	100	Introduction to Homeland Security	3
AHS	140	Introduction to Public and Community Health	3
ISX	100	Industrial Safety	3
		Total Credits	**15-18**

Associate in Fine Arts (A.F.A.) Curricula

Digital Cinematic Arts

The Associate in Fine Arts (AFA) in Digital Cinematic Arts degree program is designed for students who plan to transfer to a four-year institution to acquire a Bachelor of Fine Arts in (Digital) Cinematic Arts related fields. The embedded certificate program is designed to accommodate non-degree seeking students that wish to increase their knowledge and skills for the workplace. The program includes standard, transferable general education requirements for students seeking a higher degree. Technical courses in film history, film production techniques, cinematography, digital media, and writing for film are required in the core. Courses are offered in areas such as screenwriting, digital media design, camera, audio, acting and editing. Students will focus on the application of skills in the production of several finished short films.

Due to the nature of the digital cinematic arts, multiple ways of understanding/communicating are explored and critical competencies like creative problem solving, collaboration, time management and critical thinking are learned and practiced. Upon completion, graduates will be prepared for careers in the growing film industry in Kentucky, transfer to a 4-year institution, and for employment – worldwide – in this growing medium.

Associate in Fine Arts

Digital Cinematic Arts – 5006027029

(Offered at BLC)

General Education Core Requirements			**24**
ENG	101	Writing I	3
ENG	102	Writing I	3
		Oral Communications	3
		Humanities/Heritage	3
MAT	110	Applied Mathematics OR	3
MAT	146	Contemporary College Mathematics	(3)
		Natural Sciences	3
		Must include a laboratory experience for general education certification in the Natural Sciences category.	
		Social/Behavioral Sciences	6
Digital Literacy			**0-3**
		Digital Literacy must be demonstrated either by competency exam or by completing an Approved digital literacy course.	
Digital Cinematic Arts Core			**26**
FLM	112	Filmmaking: Treatment to Short Screen Play	4
FLM	122	Filmmaking: Storyboard through Production	4
FLM	132	Filmmaking: Editing through Distribution	4
FLM	140	Filmmaking: Lab	2
FLM	260	Cinematography	3
IMD	250	Digital Video Editing I	3
FLM	190	Film Boot Camp*	3
FLM	299	Special Topics in Film: (Topic)	3
Concentration (Choose 12 hours from list of approved Digital Cinematic Arts Electives)			**12**
FLM	190	Film Boot Camp*	3
FLM	210	Screenwriting	3
FLM	291	Cinematic Arts Internship	3
IMD	115	Introduction to Graphic Diesel	3
IMD	128	Raster Design with Adobe Photoshop	3
IMD	228	Advanced Photoshop	3
IMD	240	Multimedia Development for the Web	3
THA	126	Fundamentals of Acting	3
THA	203	Acting for Film	3
Other courses may be selected with program coordinator permission.			
Total			**62-65**

*FLM 190 can be taken twice for credit. In order for it to count in the core and as an elective, students must pass the course twice for credit.

Certificate

Filmmaking – From Script to Screen – 5006023019

(Offered at BLC)

FLM	112	Filmmaking: Treatment to Storyboard	4
FLM	122	Filmmaking: Storyboard through Production	4
FLM	132	Filmmaking: Editing through Distribution	4
FLM	140	Filmmaking: Lab	2
THA	126	Acting I OR	3
THA	203	Acting for the Camera	(3)
		Total Credits	**17**

Theatre Arts

The Associate in Fine Arts (AFA) in Theatre degree program is designed for students who plan to transfer to a four-year institution in order to pursue a BFA in the Theatre Arts and/or acquire credentials for a career in arts-related areas. The program includes general education requirements, Theatre foundation courses in acting and stagecraft, as well as a wide variety of performance and production-related electives. Students will focus on the development of performance skills and a basic knowledge of technical theatre, while participating firsthand in fully realized theatrical productions every semester. Classes will also encourage analytical skills and critical analysis. Students will be encouraged to participate in state and regional theatre auditions and festivals with audition pieces prepared specifically with an eye toward securing professional work.

Associate in Fine Arts

Theatre - 5005017019

(Offered at BLC, OWC)

General Education Core Requirements			**25**
Writing/Accessing Information			
ENG	101	Writing I	3
ENG	102	Writing I	3
		Oral Communications	3
		Heritage/Humanities (not including THA classes)	3
		Social/Behavioral Sciences	6
		Natural Sciences with laboratory	4
MA	109	College Algebra OR	3
MA	111	Contemporary Mathematics OR	(3)
MAT	150	College Algebra OR	(3)
		Higher Level Quantitative Reasoning course	(3)
Theatre Core			**15-18**
		Computer/Digital Literacy	0-3
THA	101	Introduction to Theatre	3
THA	126	Fundamentals of Acting	3
THA	226	Acting II: Scene Study (Realism)	3
THA	227	Acting III: Scene Study (Styles)	3
THA	260	Stagecraft	3

A student must pass an approved three (3) credit hour computer/digital literacy course unless the computer competency exam is successfully completed.

Practicum Core			**3**
THA	190	Production Practicum (1) (May be repeated)	
THA	191	Performance Practicum (1) (May be repeated) to equal 3 hours, OR	3
TA	195	Special Projects in Theatre Arts (Project Title) OR	(3)
THA	196	Summer Theatre Workshop	(3)
Concentration (Choose 18 hours from the Approved Theatre Electives)			**18**
THA	127	Acting Techniques	3
THA	150	Fundamentals of Production	3
THA	200	Introduction to Dramatic Literature	3
THA	283	American Theatre	3
FLM	110	Filmmaking: Treatment through Storyboard	4
FLM	120	Filmmaking: Storyboard through Production	4
FLM	130	Filmmaking: Editing through Distribution	4
(FLM courses are co-requisites)			
MUS	192	University Chorus	1
ART	110	Drawing I	3
ENG	281	Introduction to Film	3
ENG	282	International Film Studies	3
IMD	250	Digital Video Editing Final Cut	3
		Other Courses approved by program coordinator	

Summary

General Education Core Requirements	**25–28**
Theatre Core Requirements	**15**
Practicum Core	**3**
Concentration (Approved Theatre Electives)	**18**
Total	**61-64**

Visual Art

The Associate in Fine Arts (AFA) in Visual Art degree program is designed for students who plan to transfer to a four-year institution in order to pursue a BFA in the Visual Arts and/or a career in arts-related areas requiring pre-professional credentials. The program includes general education requirements, visual arts foundation courses in drawing, design and art history, as well as a wide variety of studio art electives. Students will focus on the development of artistic skills and a visual vocabulary for personal expression, while exploring both traditional and nontraditional art areas. Classes will also encourage analytical and creative problem-solving skills and experience in both verbal presentation of ideas and critical concepts. A personal portfolio of artwork will be a tangible result of a student completing this program.

Associate in Fine Arts

Visual Art - 5007027019

(Offered at HZC, OWC,WKC)

General Education Core Requirements			
ENG	101	Writing I	3
ENG	102	Writing II	3
		Oral Communications	3
		Arts & Humanities	3
		(The course chosen to satisfy this requirement must be from a discipline other than the discipline in the Fine Arts Core and/or Concentration)	
		Social/Behavioral Sciences	6
		Natural Sciences	3
		(Must include a laboratory experience for general education certification in the Natural Sciences category)	
		Quantitative Reasoning	3
		Subtotal	**24**

Fine Arts Core (Visual Art track)			
ART	105	Ancient through Medieval Art History	3
ART	106	Renaissance through Modern Art History	3
ART	110	Drawing I	3
ART	112	2-Dimensional Design	3
ART	113	3-Dimensional Design	3
ART	210	Drawing II	3
		Subtotal	**18**
Concentration (Choose 18 hours from the Approved Art Studio Electives)			**18**
ART	211	Life Drawing	3
ART	220	Painting I	3
ART	221	Painting II	3
ART	231	Jewelry/Metals I	3
ART	232	Jewelry/Metals II	3
ART	240	Ceramics I	3
ART	241	Ceramics II	3
ART	251	Graphic Communication I	3
ART	252	Typography	3
ART	253	Graphic Communication II	3
ART	254	Design Process and Presentation	3
ART	260	Sculpture I	3
ART	261	Sculpture II	3
ART	270	Printmaking I	3
ART	271	Printmaking II	3
ART	280	Beginning Film Photography	3
ART	281	Digital Photography I	3
ART	282	Digital Photography II	3
ART	290	Survival Skills for Artists	3
ART	299	Directed Studies in Art	1-3

Summary

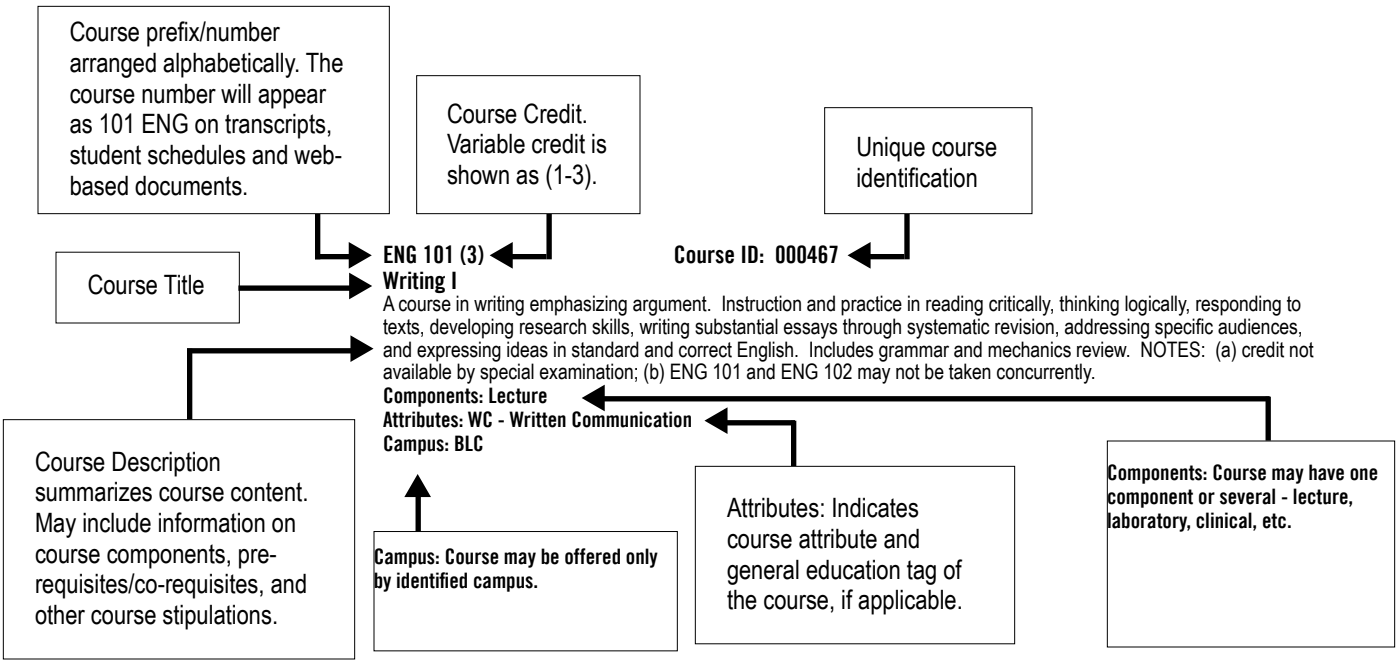
General Education Core Requirements	24
Fine Arts Core Requirements	18
Concentration (Approved Art Studio Electives)	18
Total	**60**

Degree requirements: completion of minimum 60 credit hours; minimum cumulative 2.0 GPA; minimum of 15 credit hours earned at the institution awarding the degree; cultural studies course; and demonstration of computer literacy.

1 Courses chosen to satisfy General Education requirements must be selected from an approved list which may be found in the KCTCS catalog.
2 A course used to fulfill one category cannot be used to fulfill another category.

Transitional courses (courses numbered 001-099) cannot be used to satisfy graduation requirements.

Course Descriptions



Courses are numbered as follows:

001 through 099 – Orientation and developmental courses
100 through 199 – Undergraduate credit
200 through 299 – Undergraduate credit; sophomore classification may be required.

Modular courses have four number or alpha characters with the first three numbers representing the parent course, e.g., BAS 1601 is the first module of BAS 160. The last character denotes the sequence of the module with either a numerical or alpha character. Course descriptions are published for recently approved courses, and those that have been offered in the preceding two-year period. Other active courses may be offered that are not published in the printed catalog.

A&S Arts & Sciences

A&S 100(1 - 6) **Course ID: 002195**
Special Introductory Course
This course permits the offering at the introductory level of special courses of an interdisciplinary, topical, or experimental nature. Each proposal must be approved by the Dean of the College of Arts and Sciences. A particular title may be offered at most twice under the A&S 100 number. Students may not repeat under the same title. May be repeated to a maximum of 12 credits. Prerequisite: Will be set by instructor.
Components: Lecture
Attributes: Other

AAD Arts Administration

AAD 200(3) **Course ID: 004620**
Fundamentals of Arts Administration
Arts administration, planning, evaluation, funding and finance in arts organizations are emphasized. Students are engaged in arts management projects related to career goals. Lecture: 3 credits (45 contact hours). Prerequisite: AAD 100, ENG 102.
Components: Lecture
Attributes: Technical

ACC Accounting

ACC 201(3) **Course ID: 000927**
Financial Accounting
Presents generally accepted accounting principles used for the measurement and reporting of financial information in the financial statements. Prerequisite: Sophomore standing (30 credit hours) or consent of the instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

ACC 202(3) **Course ID: 000001**
Managerial Accounting
An introduction to the use of accounting data within an organization to analyze and solve problems and to make planning and control decisions. Prerequisite: ACC 201 or ACT 101 and ACT 102. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

ACC 2011(1) **Course ID: 005946**
Financial Accounting-Accounting as an Information System
Presents the accounting cycle and preparation of financial statements. Prerequisite: Sophomore Standing (30 credit hours) or Consent of Instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

ACC 2012(1) **Course ID: 005947**
Financial Accounting-Accounting for Merchandising Businesses
Presents accounting for merchandising businesses including inventories, receivables and internal control. Prerequisite: Sophomore Standing (30 credit hours) or Consent of Instructor. and ACC 2011 or equivalent . Lecture: 1 credit (15 contact hours).
Components: Lecture

ACC 2013(1) **Course ID: 005948**
Financial Accounting-Long Term Assets and Long Term Financing Activities
Presents measuring and reporting of long term assets and long term financing activities. Prerequisite: Sophomore Standing (30 credit hours) or Consent of Instructor ACC 2011 and ACC 2012 or equivalent. Lecture: 1 credit (15 contact hours).
Components: Lecture

ACC 2021(1) **Course ID: 005949**
Cost Terms Concepts, and Classifications
Introduces the student to managerial accounting, differentiates between financial and managerial accounting, and presents cost and cost behaviors. Prerequisite: ACC 201 or (ACT 101 and ACT 102). Lecture: 1 credit (15 contact hours).
Components: Lecture

ACC 2022(1) **Course ID: 005950**
Planning and Control
Presents performance evaluation, and methods of financial statement analysis. Prerequisite: ACC 2021. Lecture: 1 credit (15 contact hours).
Components: Lecture

ACC 2023(1) **Course ID: 005951**
Using Cost Data in Decision Making
Introduces the student to master and capital budgets. Prerequisite: ACC 2022. Lecture: 1 credit (15 contact hours).
Components: Lecture

ACH Architectural Technology

ACH 100(3) **Course ID: 004679**
Construction Documents I
This is the first course of a four-semester studio sequence. Proper methods and fundamentals of architectural construction documents and residential construction will be introduced. Drafting conventions utilizing basic hand drafting tools and computer-aided drawing techniques will be studied. Lecture: 2 credits (30 contact hours): Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Computer Literacy, Technical

ACH 110(1) **Course ID: 004680**
Survey of the Architectural Profession
In this course, the student will gain an understanding of the language of architecture and develop an appreciation for building design strategies through direct analysis. In addition, various career opportunities in architecture and related professions will be explored. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical

ACH 120(3) **Course ID: 004681**
Theory and History of Architecture I
The development of architecture as it is related to world culture with an emphasis on design, structure, materials, eco-social, and political factors are considered. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACH 150(3) **Course ID: 004682**
Construction Documents II
This is the second course of a four-semester studio sequence. Students develop architectural construction documents for multi-level framed construction. Students will further develop an understanding of programming, schematics, design development, and construction document production using current computer-aided technology. Emphasis will be placed on building codes and related discipline coordination. Lecture: 2 credits (30 contact hours): Laboratory: 1 credit (45 contact hours). Prerequisite: ACH 100 or consent of instructor.
Components: Laboratory, Lecture
Attributes: Technical

ACH 160(3) **Course ID: 004683**
Building Materials and Construction I
The essentials of the theory of selected building materials (Construction Specifications Institute, Divisions 2-7) and their assembly in appropriate systems are presented with particular attention to component selection and behavior under various loads, climatic conditions and fire. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACH 161(3) **Course ID: 004684**
Building Materials and Construction II
The essentials of the theory of selected building materials (Construction Specifications Institute, Divisions 7-16) and their assembly in appropriate systems are presented with particular attention to component selection and behavior under various loads, climatic conditions and fire. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACH 170(3) **Course ID: 004685**
Theory and History of Architecture II
A survey of the architectural periods from the neo-classic to the present is presented. This course is a continuation of ACH 120. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACH 175(3) **Course ID: 004686**
Introduction to Systems
An overview of the various systems found in buildings and the influences that shape architectural design and construction is presented. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACH 180(1 - 3) **Course ID: 005463**
Instructor Consent Required
Selected Topics in Architectural Technology (Topic)
The subject matter of this course may vary from semester to semester as new technology is developed and new issues evolve and/or to address local architectural issues. This course may be repeated with different topics to a maximum of six credit hours. Prerequisite: Consent of instructor. Lecture: 1-3 credits (15-45 contact hours).
Components: Lecture
Attributes: Technical

ACH 194(3) **Course ID: 004687**
Visual Composition
In this course, the student will study the aesthetic principles found in both two-dimensional and three-dimensional compositions. These principles will be applied in exercises involving drawing, model construction and creative writing. Lecture: 1 credit (15 contact hours): Laboratory: 2 credits (120 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ACH 195(3) **Course ID: 004856**
Computer Aided Drafting I
Students learn how computer hardware and software are used in preparing architectural documents. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Computer Literacy, Technical

ACH 198(1 - 3) **Course ID: 015986**
Practicum in Architectural Technology
Provides supervised, on-the-job work experience related to the student's educational objectives; students who participate in the practicum do not receive compensation. Pre-requisite: Completion of a minimum of 12 hours in Architectural Technology (ACH) courses with a min. cumulative GPA of 2.0 in all courses. Practicum: 1.0 3.0 credits (40-120 contact hours).
Components: Practicum
Attributes: Technical

ACH 200(3) **Course ID: 004688**
Construction Documents III
This is the third course of a four-semester studio sequence. Students study the methods by which commercial buildings are designed and constructed. Basic skills are developed relating to the implementation of determinants in this process such as program analysis, applicable codes, construction methods and materials as well as computer applications. Through the completion of a series of structured projects including the preparation of a set of architectural construction documents for a medium-sized building, students apply the knowledge necessary to achieve these goals. Lecture: 2 credits (30 contact hours): Laboratory: 1 credit (45 contact hours). Prerequisite: ACH 150 and ACH 185/ACH 195 or consent of instructor.
Components: Laboratory, Lecture
Attributes: Technical

ACH 225(3) **Course ID: 004689**
Structures
Students study structural materials and systems including the design of simple structural components. Prerequisite: ACH 175 and MAH 125, or consent of instructor.
Components: Lecture
Attributes: Technical

ACH 250(3) **Course ID: 004690**
Construction Documents IV
This is the fourth course of a four-semester studio sequence. Students prepare a set of advanced construction documents using current computer-aided drafting techniques. Emphasis will be placed on design principles and site development for a commercial construction project. Lecture: 2 credits (30 contact hours): Laboratory: 1 credit (45 contact hours). Prerequisite: ACH 200 or consent of instructor.
Components: Laboratory, Lecture
Attributes: Technical

ACH 260(3) **Course ID: 004691**
Office Practice
This course is intended to serve as a capstone course in the Architectural Technology program. Emphasis is placed on preparing students for the workplace by focusing on the professional, legal, and business aspects of the architectural and construction industries. Case studies are reviewed and projects are prepared by students with the goal of introducing them to a broader set of circumstances that affect how decisions are made in the practice of architecture. Lecture: 3 credits (45 contact hours). Prerequisite: ACH 110 and ACH 200 or equivalent.
Components: Lecture
Attributes: Technical

ACH 275(3) **Course ID: 004692**
Mechanical and Electrical Systems
Students engage in a qualitative and quantitative study of environmental control systems used in buildings. Prerequisite: ACH 175 and MAT 125, or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACH 280(2) **Course ID: 016138**
Revit/Building Information Modeling
Introduces Building Information Modeling (BIM) using Autodesk Revit or other similar and related software, methods and processes. Provides students with skills to produce and present residential and commercial design models, construction documents, and to extract information and data from the model. Incorporates investigations into issues related to sustainable design and the integration of other software for related analysis. Pre-requisite: ACH 195, or consent of instructor. Lecture/Lab: 2.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACH 285(3) **Course ID: 005464**
Computer-Aided Drafting II
Students learn how to modify selected computer aided drafting software to enhance construction document production. Integration of other software will also be discussed. Prerequisite: ACH 185 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture

ACH 290(3) **Course ID: 004694**
Building Codes I
Students will analyze the content and format of current building codes. The necessity for building codes, problems in interpretation and application as well as legal aspects will be discussed. The main objective is to familiarize students with the basic provisions and procedures associated with building code administration. Prerequisite: ACH 150 and ACH 160, or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACH 291(3) **Course ID: 004695**
Construction Management
Students examine the principles and current practices of construction management with emphasis on project organization, scheduling and cost control. Prerequisite: ACH 150, ACH 160 and ACH 161, or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACH 292(3) **Course ID: 004696**
Building Codes II
This course will be continuation of ACH 290, Building Codes I, with a more in-depth study of current building codes. Prerequisite: ACH 290 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACH 293(3) **Course ID: 004697**
Presentation Techniques
Students will explore a variety of presentation and rendering techniques used in the architectural profession. Design skills and the understanding of spatial relationships will be further developed. Prerequisite: ACH 100 or consent of instructor. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ACH 294(3) **Course ID: 004698**
Specification Writing
This course provides an in-depth study of the importance of specifications in the design and construction process. Students will engage in research, evaluate the quality of building materials, study the methods of writing specifications, and gain exposure to industry-standard software in preparing a variety of specifications. Prerequisite: ACH 150, ACH 160, ACH 161, or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACH 295(3) **Course ID: 004693**
Computer Aided Drafting II
Students learn how to modify selected computer aided drafting software to enhance construction document production. Integration of other software will also be discussed. Prerequisite: ACH 195 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACH 297(3) **Course ID: 004699**
Estimating Techniques
Students investigate the factors affecting the cost of construction, labor productivity, materials, overhead and profit, including area and volume computations. Current methods of cost estimating will be applied. Prerequisite: ACH 150 and MAT 125; or consent of instructor. Lecture: 2.5 credits (37.5 contact hours); Laboratory: 0.5 credits (7.5 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ACH 298(3) **Course ID: 004700**
Computer 3D Modeling
Students learn how computer hardware and software are used in preparing 3D architectural drawings and client-oriented presentations. Prerequisite: ACH 150 and ACH 185 or consent of instructor.
Components: Lecture
Attributes: Technical

ACR Air Conditioning and Refrigeration

ACR 100(3) **Course ID: 000949**
Refrigeration Fundamentals
Introduces refrigerant piping and fundamentals of refrigeration including environmental issues associated with HVAC. Corequisite: ACR 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACR 101(2) **Course ID: 000950**
Refrigeration Fundamentals Lab
Introduces fundamentals of refrigeration including environmental issues associated with HVAC and refrigerant piping. Develops proper hands-on techniques in the servicing and troubleshooting of basic systems. Stresses proper use and care of tools, equipment, materials, and safety. Corequisite: ACR 100. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

ACR 102(3) **Course ID: 000951**
HVAC Electricity
Introduces students to basic physics of electricity. Covers Ohm's law; measuring resistance, voltage, ohms, watts and amps; constructing various types of electrical circuits; selecting wire and fuse sizes; and troubleshooting an electric motor and motor controls. Corequisite: ACR 103. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACR 103(2) **Course ID: 000952**
HVAC Electricity Lab
Introduces students to basic physics of electricity. Provides for application of Ohm's law; and measure resistance, voltage, ohms, watts and amps; construct various types of electrical circuits; select wire and fuse sizes; and learn to troubleshoot an electric motor and motor controls. Corequisite: ACR 102. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

ACR 112(3) **Course ID: 000953**
Sheet Metal Fabrication
The student will learn to make patterns and lay out and construct common sheet metal duct fittings. Corequisite: ACR 113.
Components: Lecture
Attributes: Technical

ACR 113(2) **Course ID: 000954**
Sheet Metal Fabrication Lab
Provides lab time for students to lay out, cut, construct, and install common sheet metal duct fittings. Corequisite: ACR 112. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

ACR 130(3) **Course ID: 000955**
Electrical Components
Defines the electrical components of an air conditioning system. Includes different types of line voltages, wiring diagrams and solid state devices. Emphasizes safety. Prerequisite: ACR 102 with a grade of "C" or greater. Corequisite: ACR 131. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACR 131(2) **Course ID: 000956**
Electrical Components Lab
Permits practice using different types of line voltages, reading wiring diagrams, and using solid state devices. Emphasizes safety. Prerequisite: ACR 102 with a grade of "C" or greater. Corequisite: ACR 130. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

ACR 170(3) **Course ID:000957**
Heat Load/Duct Design
Introduces fundamentals needed to calculate heat gain and heat loss, thereby determining air conditioner/furnace size which will be used to calculate the correct duct size. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACR 198(2) **Course ID:000958**
Instructor Consent Required
Practicum
Practicum provides supervised on-the-job work experience related to the student's educational objectives. Students participating in Practicum do not receive compensation. Prerequisite: Permission of the Instructor.
Components: Practicum
Attributes: Technical

ACR 200(3) **Course ID:000960**
Commercial Refrigeration
Develops techniques for servicing and troubleshooting mechanical and electro-mechanical refrigeration components. Emphasizes electrical and refrigeration safety. Covers proper tool use and environmentally sound refrigerant handling. Prerequisite: (ACR 100 and ACR 101) with a grade of "C" or greater. Corequisite: ACR 201. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACR 201(2) **Course ID:000961**
Commercial Refrigeration Lab
Provides techniques in servicing and troubleshooting mechanical and electro-mechanical refrigeration components. Emphasizes electrical and refrigeration safety. Covers proper tool use and environmentally sound refrigerant handling. Prerequisite: (ACR 100 and ACR 101) with a grade of "C" or greater. Corequisite: ACR 200. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

ACR 206(5) **Course ID:007376**
Boilers
Develops techniques for servicing, troubleshooting and performing preventive maintenance on steam generating systems. Emphasizes electrical and steam safety. Covers proper tool and instrument use and practices for the efficient applications on steam systems used in commercial and industrial settings. Pre-requisite: ACR 102 and ACR 103. Lecture/Lab: 5.0 credits (105 contact hours).
Components: Lecture
Attributes: Technical

ACR 207(5) **Course ID:007377**
Commercial HVAC Systems
Develops techniques for servicing, troubleshooting and performing preventive maintenance on commercial HVAC systems. Emphasizes electrical and mechanical safety. Covers tools and instruments used in installing, troubleshooting, and preforming preventive maintenance on commercial HVAC systems. Pre-requisite: (ACR 100 and ACR 101 and ACR 102 and ACR 103) or Consent of the Instructor. Lecture/Lab: 5.0 credits (105 contact hours).
Components: Lecture
Attributes: Technical

ACR 208(4) **Course ID:007378**
Chillers
Develops techniques for servicing, troubleshooting and performing preventive maintenance on high-pressure, low-pressure and absorption chilled water systems. Emphasizes electrical and safety. Covers proper tool and instrument use and practices for the efficient applications on chilled water systems used in commercial and industrial settings. Pre-requisite: ACR 100 and ACR 102 and ACR 103. Lecture/Lab: 4.0 credits (75 contact hours)
Components: Lecture
Attributes: Technical

ACR 209(4) **Course ID: 007379**
Manual N Commercial Load Calculation and Design
Covers fundamentals needed to calculate heat gain and heat loss for commercial buildings. Introduces design conditions, solar heat gain, ventilation, internal heat gains, psychrometrics and distribution systems for air conditioning and heating, thereby determining the correct size of equipment needed for different commercial buildings. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

ACR 210(3) **Course ID: 000962**
Ice Machines
Introduces operation, checking, adjusting and troubleshooting commercial ice makers. Covers adjusting, checking, cleaning and troubleshooting commercial ice machines. Prerequisite: (ACR 100 and ACR 102) with a grade of "C" or greater. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACR 250(3) **Course ID: 000963**
Cooling and Dehumidification
Explains working characteristics of air conditioning units with air and water cooled condensers. Covers line, low voltage and pneumatic controls. Prerequisite: (ACR 100 & ACR 101) with a grade of "C" or greater. Corequisite: ACR 251. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACR 251(2) **Course ID: 000964**
Cooling and Dehumidification Lab
Prepares the student for installing, servicing, and troubleshooting air conditioning systems with water and air cooled condensers and line and low voltage. Prerequisite: (ACR 100 & ACR 101) with a grade of "C" or greater. Corequisite: ACR 250. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

ACR 260(3) **Course ID: 000965**
Heating and Humidification
Discusses principles of operation and application of heating systems from simple electric and fossil fuel furnaces through more complex systems such as oil burners, boilers, and hydronic systems. Concentrates on both line and control voltage circuitry pertaining to these systems. Pre-requisite: ACR 102 &103 or EET 154 & 155 or ETT 112 & 113 or IMT 110 & 111 or consent from the instructor. Corequisite: ACR 262. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACR 262(2) **Course ID: 016230**
Heating and Humidification Lab
Provides lab time for application of troubleshooting, checking, adjusting, and installing heating units currently in use. Pre-requisite: ACR 102 &103 or EET 154 & 155 or ETT 112 & 113 or IMT 110 & 111 or consent from the instructor. Co-requisite: ACR 260. Laboratory 2.0 credits (60 contact hours)
Components: Laboratory
Attributes: Technical

ACR 270(3) **Course ID: 000967**
Heat Pump Application
Explains reverse cycle heating systems, defrost cycles, reversing valves, and auxiliary heating. Concentrates on line and control voltage circuitry pertaining to these units. Prerequisite: [(ACR 100 and ACR 102) with a grade of "C" or greater] or Permission of Instructor. Corequisite: ACR 271. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACR 271(2) **Course ID: 000968**
Heat Pump Application Lab
Provides for application of troubleshooting, checking, adjusting, and installing reverse cycle units. Prerequisite: [(ACR 100 and ACR 102) with a grade of "C" or greater] or Permission of Instructor. Corequisite: ACR 270. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

ACR 290(3) **Course ID: 000969**
Journeyman Preparation
Includes lectures, discussions, and presentations pertaining to the proper application of HVAC codes. Prepares the student to pass the Kentucky Journeyman HVAC licensing exam. (This class should be taken at the end of the program.) Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACR 291(1) **Course ID: 000970**
Instructor Consent Required
Special Problems I
A course designed for the student who has demonstrated specific special needs. Prerequisite: Permission of Instructor
Components: Laboratory
Attributes: Technical

ACR 293(2) **Course ID: 000971**
Instructor Consent Required
Special Problems II
A course designed for the student who has demonstrated specific special needs. Prerequisite: Permission of Instructor
Components: Laboratory
Attributes: Technical

ACR 295(3) **Course ID: 000972**
Instructor Consent Required
Special Problems III
A course designed for the student who has demonstrated specific special needs. Prerequisite: Permission of Instructor
Components: Laboratory
Attributes: Technical

ACR 298(2) **Course ID: 000973**
Instructor Consent Required
Practicum
Practicum provides supervised on-the-job work experience related to the student's education objectives. Students participating in Practicum do not receive compensation. Prerequisite: Permission of the Instructor.
Components: Practicum
Attributes: Technical

ACR 299(2) **Course ID: 000974**
Instructor Consent Required
Cooperative Education Program
Co-op provides supervised on-the-job work experience related to the student's educational objectives. Students participating in the Cooperative Education program receive compensation for their work. Prerequisite: Permission of the Instructor.
Components: Co-Op
Attributes: Technical

ACT Accounting

ACT 101(3) **Course ID: 000004**
Fundamentals of Accounting I
Students are introduced to accounting terminology and general theoretical principles. The major focus of the course is on the accounting cycle and the communication of financial information to decision-makers. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACT 102(3) **Course ID: 000005**
Fundamentals of Accounting II
Basic financial accounting concepts and methods are expanded to include accounting for partnerships and corporations. Lecture: 3 credits (45 contact hours). Prerequisite: ACT 101.
Components: Lecture
Attributes: Technical

ACT 177(3) **Course ID: 005238**
Entrepreneurial Accounting
Includes issues and concerns that are vital to small and medium-size businesses. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

ACT 196(3) **Course ID: 000007**
Payroll Accounting
Introduces the design and implementation of modern payroll systems. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

ACT 277(3) **Course ID: 000008**
Managerial Accounting Topics
The study of the uses of accounting information in managerial planning and control of organizations. Prerequisite: ACC 202. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACT 279(3) **Course ID: 000010**
Computerized Accounting Systems
Applying accounting concepts and principles by using accounting software, for both service businesses and merchandisers. Includes internal control principles for both manual and computerized accounting systems. Prerequisite: ACC 201 or ACT 101 and ACT 102 or concurrent enrollment in ACT 102. Digital literacy 3.0 hours. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

ACT 281(3) **Course ID: 000013**
Individual Taxation
The study of the theory and applications of federal and individual income taxes will be emphasized. Lecture: 3 hours. Prerequisite: One semester of college accounting or consent of instructor.
Components: Lecture
Attributes: Technical

ACT 286(3) **Course ID: 000014**
Financial Accounting Topics
Additional in-depth exposure to financial accounting procedures for classifying, recording, reporting, and disclosure; intended primarily for students enrolled in the Accounting Technology AAS program and the Accounting Option in the Business Administration AAS Program. Prerequisite: ACC 201 or ACT 101 and ACT 102. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACT 295(3) **Course ID: 000016**
Corporate and Partnership Taxation
Emphasizes the study of federal and state tax laws applying to corporations, partnerships, and other entities. Prerequisite: ACT 281 or consent of instructor. Lecture 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACT 1771(0.6) **Course ID: 005239**
Rationale for a Well Designed Accounting System
Developing a well designed accounting system for the entrepreneur. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

ACT 1772(0.6) **Course ID: 005240**
Contractual and Legal Reporting Requirements
Common contractual and legal reporting requirements. Lecture: 0.6 credits (9 contact hours). Prerequisite: ACT 1771 or consent of the instructor.
Components: Lecture

ACT 1773(0.6) **Course ID: 005241**
Overview of Accounting for the Entrepreneur
Overview of accounting for the entrepreneur. Lecture: 0.6 credits (9 contact hours). Prerequisite: ACT 1772 or consent of the instructor.
Components: Lecture

ACT 1774(0.6) **Course ID: 005242**
Introduction to Computer Accounting Software to Record Basic Accounting Transactions
Computer accounting software to record basic accounting transactions. Lecture: 0.6 credits (9 contact hours). Prerequisite: ACT 1773 or consent of instructor.
Components: Lecture

ACT 1775(0.6) **Course ID: 005243**
Introduction to Computer Accounting Software to Generate Financial Statements
Computer accounting software to generate financial statements. Lecture: 0.6 credits (9 contact hours). Prerequisite: ACT 1774 or consent of the instructor.
Components: Lecture

ACT 1961(0.5) **Course ID: 006117**
Payroll Records
Introduces the records required for today's payroll or human resource manager. Covers the relationship between Payroll and Human Resources and their common laws. Concludes with salary computations and methods to compute Gross Payroll. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

ACT 1962(0.5) **Course ID: 006118**
Payroll Taxes
Covers federal and state tax withholding and employer-side payroll expenses. Prerequisite: ACT 1961. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

ACT 1963(0.5) **Course ID: 006119**
Accounting for Payroll
Covers federal and state unemployment laws and accounting for payroll. Prerequisite: ACT 1961. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

ACT 1964(1) **Course ID: 006120**
Manual Payroll
Requires the student to complete a Quarterly Payroll Simulation. Prerequisite: ACT 1962 & 1963. Lecture: 1 credit (15 contact hours).
Components: Lecture

ACT 1965(0.5) **Course ID: 006121**
Computerized Payroll
Requires the student to complete a Computerized Payroll Simulation. Prerequisite: ACT 1962 & 1963. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

ACT 2791(1) **Course ID: 015822**
Computer Accounting Basics
Presents accounting concepts and principles for a merchandiser using computerized accounting software. Pre-requisite: ACC 201 or ACT 101 and ACT 102 or concurrent enrollment in ACT 102. Digital literacy 3.0 hours. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

ACT 2792(1) **Course ID: 015823**
Computer Accounting Procedures
Presents computerized accounting concepts and principles for businesses including service providers. Pre-requisite: ACT 2791. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

ACT 2793(1) **Course ID: 015824**
Advanced Features and Controls
Presents accounting concepts and principles for new businesses, including merchandisers, and covers internal controls. Pre-requisite: ACT 2792. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

ADX Automotive Technology

ADX 120(3) **Course ID: 000983**
Basic Automotive Electricity
Introduces the student to the principles, theories, and concepts of the automotive electrical system that include the unique diagramming, coding and locating of wiring, and component devices. Co-requisite: ADX 121. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ADX 121(2) **Course ID: 000984**
Basic Automotive Electricity Lab
Provides hands-on work designed to allow the student to use the concepts, principles, and theories covered in Basic Automotive Electricity, ADX 120, in practical application. Provides the student a work experience alternating between periods of work off campus and work in a classroom laboratory setting. Co-requisite: ADX 120. Lab: 2.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

ADX 150(3) **Course ID: 000985**
Engine Repair
Provides a series of lectures and demonstrations on the fundamentals of engine repair, troubleshooting, and engine operation and maintenance. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ADX 151(2) **Course ID: 000986**
Engine Repair Lab
Provides practical experiences and applications relating to engine repair, inspection, trouble shooting and maintenance. The student may be provided a work experience alternating between periods of work off campus and work in a classroom laboratory setting. Pre-requisite or Corequisite: ADX 150. Lab: 2.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

ADX 170(3) **Course ID: 000987**
Climate Control
Introduces the theory and operation of heating and air conditioning systems, air conditioning terminology, and servicing and troubleshooting mechanical and electrical circuits of heating and air conditioning systems. Co-requisite: ADX 171. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ADX 171(1) **Course ID: 000988**
Climate Control Lab
Provides opportunities to trouble shoot, repair and perform maintenance on heating and air conditioning systems. Provides experiences in safety precautions, special tool uses, component operation and how to service and trouble shoot the complete system. The student may be provided a work experience alternating between periods of work off campus and work in a classroom laboratory setting. Co-requisite: ADX 170. Lab: 1.0 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

ADX 260(3) **Course ID: 000989**
Electrical Systems
Focuses on the theory and principles relating to automotive electrical/electronic components. Co-requisite: ADX 261. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ADX 261(2) **Course ID: 000990**
Electrical Systems Lab
Provides practical applications and experiences related to the theory and principles of automotive electrical/electronic components. The student may be provided a work experience alternating between periods of work off campus and work in a classroom laboratory setting. Co-requisite: ADX 260. Lab: 2.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

AER Aeronautics

AER 110(3) **Course ID: 006516**
Fundamentals of Aerodynamics/Private Pilot Ground School
Covers the fundamentals of aerodynamics aircraft systems, aeronautical decision making (ADM), applicable federal regulations, flight planning and aeronautical charts, meteorology, flight navigation, and weight and balance. Requires no previous aviation experience and is formatted to take "zero" time students and ready them for the national private pilot examination. Lecture: 3.0 credit hours (45 contact hours).
Components: Lecture
Attributes: Pilot Course, Technical

AET Applied Engineering Technology

AET 100(1) **Course ID: 006358**
Introduction to Lean Systems
Presents methodologies for Lean systems to include Lean Manufacturing basics and tools, Lean implementation, Lean measures, Six-Sigma, and Lean supply chain design and management. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical

AET 102(4) **Course ID: 006359**
Introduction to Energy
Introduces the scientific principles of energy and fuels and investigates specific topics: nature and extent of energy resources, economics and environmental effects, alternative energy, energy technology, health and safety. Lecture/Lab: 4 credits (75 contact hours).
Components: Lecture
Attributes: Technical

AET 110(4) **Course ID: 006360**
Introduction to Circuit Analysis
Covers basic electrical components as well as DC/AC circuit configurations; introduces the theory and operation of solid state devices such as diodes, BJTs, FETs, and operational amplifiers; emphasizes circuit construction, analysis, and troubleshooting. Corequisite: MT 125 or Consent of Instructor. Lecture/Lab: 4 credits (75 contact hours).
Components: Lecture
Attributes: Technical

AET 112(4) **Course ID: 006361**
Alternative Energy Fundamentals
Addresses topics of alternative energy sources including passive and active solar systems, fuel cells, hydroelectric power, geothermal heat transfer, photovoltaic systems, bio fuels, and wind energy. Prerequisite: AET 102. Lecture/Lab: 4 credits (75 contact hours).
Components: Lecture
Attributes: Technical

AET 114(4) **Course ID: 006362**
Solar and Wind Energy Generation
Introduces the methods and equipment necessary for the production of electrical energy by alternative means to include photovoltaic systems, wind turbines and solar water heating. Prerequisite: AET 110 or consent of instructor. Lecture/Lab: 4 credits (75 contact hours).
Components: Lecture
Attributes: Technical

AET 120(4) **Course ID: 006363**
Power Electronics
Introduces the circuitry and components used to convert the power generated by alternative methods to line voltage and current values commonly used in residential and commercial electrical installations; includes Thyristor theory and application, inverter types and application, and battery charging and maintenance. Prerequisite: AET 110 or Consent of instructor. Lecture/Lab: 4 credits (90 contact hours).
Components: Lecture
Attributes: Technical

AET 130(3) **Course ID: 006364**
Industrial Sensors
Covers various types of industrial sensors and opto-electronic devices. Prerequisite: AET 110 or Consent of Instructor. Lecture/Lab: 3 credits (60 contact hours).
Components: Lecture
Attributes: Technical

AET 140(4) **Course ID: 006365**
Industrial Equipment Maintenance
Covers maintenance techniques and practices commonly found in a wide variety of industrial settings to include areas such as lubrication, mechanical drives, bearings, and safe working practices. Lecture/Lab: 4 credits (90 contact hours).
Components: Lecture
Attributes: Technical

AET 150(4) **Course ID: 006366**
Advanced Circuit Analysis
Introduces the more advanced concepts of DC and AC circuits. Topics include Kirchhoff's Laws, network theorems, Delta-Y conversion, reactive circuits, complex impedances, Z-matching, resonance, and LC tank loading effect. Prerequisite: AET 110 or Consent of Instructor. Lecture/Lab: 4 credits (75 contact hours).
Components: Lecture
Attributes: Technical

AET 160(4) **Course ID: 006367**
Industrial Controls Electronics
Introduces the concepts of industrial power control to include solid state devices, controllers, single and poly-phase rectification, and DC power supplies. Prerequisite: AET 110 or Consent of Instructor. Lecture/Lab: 4 credits (75 contact hours).
Components: Lecture
Attributes: Technical

AET 170(4) **Course ID: 006368**
Digital Circuits and Concepts
Covers the basics of digital electronics to include logic gates, number systems, Boolean algebra, Karnaugh mapping, registers, bi-stable circuits, and basic arithmetic circuits. Prerequisite: AET 110 or consent of instructor. Lecture/Lab: 4 credits (75 contact hours).
Components: Lecture
Attributes: Technical

AET 180(3) **Course ID: 006369**
Industrial Computer Architecture
Introduces the basic layout of industrial computers as preparatory course leading into the more advanced PLC's; includes binary and hexadecimal number systems, bus oriented computer systems, I/O scan, interfacing considerations, and introduction to programmable controllers. Prerequisite: AET 110 or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

AET 190(4) **Course ID: 006370**
Industrial Computer Programming Concepts
Covers programming concepts specifically directed toward industrial programmable devices such as PLCs. Prerequisite: Consent of instructor. Lecture/Lab: 4 credits (75 contact hours).
Components: Lecture
Attributes: Technical

AET 200(4) **Course ID: 006371**
Integrated Circuits
Focuses on integrated circuits as they apply to linear and non-linear applications to include integration techniques, operational amplifiers, linear voltage amplifiers, waveform generators, comparators, active filters, and interfacing. Prerequisite: AET 150 or Consent of Instructor. Lecture/Lab: 4 credits (75 contact hours).
Components: Lecture
Attributes: Technical

AET 210(4) **Course ID: 006372**
Alternative Energy Independent Studies
Provides the student with the opportunity to put to practical use, by way of a student project, the knowledge and skills gained in AET 102, AET 112, AET 114, and AET 120. Prerequisite: AET 112 and AET 114 and AET 120. Lecture/Lab: 4 credits (105 contact hours).
Components: Lecture
Attributes: Technical

AET 220(4) **Course ID: 006373**
Modulation Techniques and Applications
Introduces the various types of electronic modulation including amplitude, frequency, and phase modulation with emphasis on antenna theory and the study of RF power in both resonant and non-resonant loads. Prerequisite: AET 200 or Consent of Instructor. Lecture/Lab: 4 credits (75 contact hours).
Components: Lecture
Attributes: Technical

AET 230(3) **Course ID: 006374**
Introduction to Circuit Design
Utilizes ideas learned in previous electronics courses to design, build, and test circuits based upon design criteria provided by the instructor. Prerequisite: [AET 170 and AET 200] or Consent of Instructor. Lecture/Lab: 3 credits (60 contact hours).
Components: Lecture
Attributes: Technical

AET 240(4) **Course ID: 006375**
Industrial Machinery Control
Examines AC and DC motors and their associated control equipment. Introduces ladder logic and schematic diagram interpretation and drawing. Gives the student practical experience in the design, construction and troubleshooting of industrial motor control circuitry. Advances the use of solid state devices and system integration. Prerequisite: AET 110. Lecture/Lab: 4 credits (90 contact hours).
Components: Lecture
Attributes: Technical

AET 250(4) **Course ID: 006376**
PLC Networking
Introduces the basic concepts in PLC networking to include networking protocols specific to industrial controllers, ASCII codes, bus topologies, and handling of remote I/O. Prerequisite: AET 190. Lecture/Lab: 4 credits (75 contact hours).
Components: Lecture
Attributes: Technical

AET 260(4) **Course ID: 006377**
Instructor Consent Required
Robotics and Programmable Controls
Introduces the theory of robots and programmable controls including terminology, components, and basic programming; provides theory of servo and non-servo robots and their controllers. Prerequisite: Consent of instructor. Lecture/Lab: 4 credits (75 contact hours).
Components: Lecture
Attributes: Technical

AET 270(4) **Course ID: 006378**
Advanced PLC Programming
Introduces the student to the wide range of capabilities, beyond basic programming needs, which are available to the modern PLC user. Includes data Manipulation; shift register and sequencer instructions; binary, octal and hexadecimal numbering systems; and analog inputs and outputs. Prereqisite: EET 276 and EET 277. Lecture/Lab: 4 credits (75 contact hours).
Components: Lecture
Attributes: Technical

AFS Air Force Studies

AFS 111(1) **Course ID: 005359**
Aerospace Studies I
A course designed to provide the student with a basic understanding of the nature and principles of war, national power, and the Department of Defense role in the organization of national security. The student also develops leadership abilities by participating in a military organization, the cadet corps, which offers a wide variety of situations demanding effective leadership. Corequisite: AFS 112. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical

AFS 112(1) **Course ID: 005360**
Leadership Laboratory I
A course designed for development of basic skills required to be a manager, including communications, human relations, and administration of equal opportunity. Credit will not be granted toward the hours requirements for the degree. Pass/Fail only. Corequisite: AFS 111. Laboratory: 1 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

AFS 113(1) **Course ID: 005361**
Aerospace Studies I
A course designed to provide the student with a basic understanding of the contribution of aerospace power to the total U.S. strategic offensive and defensive military posture. The student also develops leadership abilities by participating in a military organization, the cadet corps, which offers a wide variety of situations demanding effective leadership. Prerequisite: AFS 111. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Other

AFS 114(1) **Course ID: 005362**
Leadership Laboratory 1
A continuation of AFS 113. A course designed to develop managerial skills including superior/subordinate relationships, communications, customs and courtesies, basic drill movements and career progression requirements. Credit will not be granted toward the hours requirements for the degree. Pass/Fail only. Corequisite: AFS 113. Laboratory: 1 credit (45 contact hours).
Components: Laboratory
Attributes: Other

AFS 211(1) **Course ID: 005222**
Aerospace Studies II
Introduces the study of air power from a historical perspective; focuses on the development of air power into a primary element of national security. Leadership experience is continued through active participation in the cadet corps. Prerequisite: AFS 111, 113 or PAS approval. Lecture, 1 hour; leadership, laboratory, one hour.
Components: Lecture
Attributes: Technical

AFS 212(1) **Course ID: 005223**
Leadership Laboratory II
A course designed for development of advanced skills required to be a manager/leader, including leadership studies, public speaking, group dynamics, motivation and preparation for field training. Credit will not be granted toward the hours requirements for the degree. Pass/Fail only. Corequisite: AFS 211.
Components: Laboratory
Attributes: Technical

AFS 213(1) **Course ID: 005235**
Aerospace Studies II
Provides a foundation for understanding how air power has been employed in military and non-military operations to support national objectives. Examines the changing mission of the defense establishment, with particular emphasis on the United States Air Force. Leadership experience is continued through participation in the cadet corps. Lecture, one hour; leadership laboratory, one hour per week. Prerequisite: AFS 111, 113 or PAS approval.
Components: Lecture
Attributes: Other

AFS 214(1) **Course ID: 005236**
Leadership Laboratory II
A continuation of AFS 213. A course designed to develop supervisory management skills to include communications, techniques of critique, social actions, personnel evaluation procedures, problem solving, role playing and field training preparation. Credit will not be granted toward the hours requirements for the degree. Pass/Fail only. Corequisite: AFS 213.
Components: Laboratory
Attributes: Other

AGR Agriculture

AGR 101(3) **Course ID: 000750**
The Economics of Food and Agriculture
Introduces the field of agricultural economics and some of the basic tools and concepts of decision-making. Illustrates concepts in terms of selected current social and economic issues including the role of agriculture in both a national and international dimension. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, Technical

AGR 125(3) **Course ID: 002209**
Introduction to Fertilizers and Soils
Introduces practical aspects of soils and fertilizers as related to plant growth and production. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credits (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

AGR 130(2) **Course ID: 005135**
Field Applications in Agriculture
Includes methods of solving many application problems encountered in agriculture using applied mathematical and logic skills. Emphasizes practical mathematical skills already acquired from secondary education to address agricultural situations involving computations necessary for upper level courses in agriculture. Requires some knowledge of agricultural situations. Prerequisite: MAT 055 or equivalent placement level. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

AGR 140(3) **Course ID: 000021**
Issues In Agriculture
Provides an introduction to agriculture and current issues pertaining to the agricultural industry. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

AGR 150(3) **Course ID: 000022**
Agricultural Power
Provides an introduction to farm equipment and their power units through classroom instruction that concentrates on specific principles that govern the equipment. Includes a lab that applies the principles learned in the classroom. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

AGR 165(3) **Course ID: 000023**
Agricultural Seminar
Includes reports and discussion of problems in relation to operations of agricultural business. Offered only in summer. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

AGR 170(3) **Course ID: 000024**
Introduction to Equipment, Machines, and Engines
Provides an introduction to tractors, combines, balers, forage harvesters and windrowers and various attachments. Includes a study of the operation, adjustments, and repairs. Covers an introduction to engines in which theory and minor repairs will be discussed. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (90 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

AGR 180(2) **Course ID: 000025**
Agricultural Internship I
Provides the opportunity to broaden the educational experience through appropriate observation and individualizes work assignments related to the prerequisite and/or co-requisite course objectives. The students will spend 80 hours of supervised field experience in an approved Agricultural Industry. Pre-requisite Or Co-requisite: (AGR 150 and AGR 140) or Consent of Instructor. Lab: 2.0 credits (75 contact hours).
Components: Laboratory
Attributes: Technical

AGR 190(2) **Course ID: 000026**
Agricultural Internship II
Provides the opportunity to broaden the educational experience through appropriate observation and individualized work assignments related to the prerequisite and/or co-requisite course objectives. The students will spend 80 hours of supervised field experience in an approved Agricultural Industry. Prerequisite: (AGR 125 and AGR 180 and AGR 170) or Consent of Instructor. Lab: 2.0 credits (75 contact hours).
Components: Laboratory
Attributes: Technical

AGR 200(2) **Course ID: 000028**
Agricultural Internship III
Provides the opportunity to broaden the educational experience through appropriate observation and individualized work assignments related to the prerequisite and/or co-requisite course objectives. The students will spend 80 hours of supervised field experience in an approved Agricultural Industry. NOTE: Internship III is a variable credit (1-2 credit hours) with a total 2 credit hour program requirement. Students must take a minimum of one credit hour of Internship in their last semester of enrollment or after all agricultural classes have been completed. Prerequisite: AGR 180 and AGR 190. Lab: 2.0 credits (75 contact hours).
Components: Laboratory
Attributes: Technical

AGR 220(3) **Course ID: 000030**
Computers In The Agricultural Environment
Provides an introduction to computers as they relate to the agricultural environment. Prerequisite: CIS 100. Lecture 2.0 credits (30 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

AGR 223(3) **Course ID: 004010**
Introduction to Artificial Insemination for Cattle
The primary objective of this course is to instruct students in artificial insemination techniques in cattle. Topics will include reproductive system, herd health, nutrition, semen handling, and estrus detection and synchronization. Prerequisite: AG 240 or consent of Instructor.
Components: Laboratory, Lecture
Attributes: Technical

AGR 230(3) **Course ID: 005136**
Career Development in Agriculture
Includes essential aspects of career preparation, entry, adjustment, and advancement in agriculture and related fields. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

AGR 240(3) **Course ID: 000032**
Introduction to Animal Science
Provides a limited overview of the farm species of livestock. Includes the study of major livestock breeds of beef and dairy cattle, sheep, swine, poultry, and horses. Covers management application for livestock production as well as production facilities. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credits (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

AGR 250(3) **Course ID: 000033**
Introduction to Plants/Crop Production
Familiarizes students with the basic principles and theories involved in field crop production. Provides a limited understanding of how crops are grown as a prelude to growing crops successfully. Covers pest and pesticides as well as plant disease and protection. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

AGR 260(3) **Course ID: 007387**
Introduction to Sustainable Agriculture
Provides students with a clear perspective on the principles, history, and practices of sustainable agriculture in our local and global communities. Provides understanding of the challenges to sustainability in our present system of agriculture. Enables students to identify principles of sustainable agriculture as they relate to basic production practices. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

AGR 270(3) **Course ID: 007388**
Introduction to Organic Agriculture
Introduces students to the theories, practice, and policy of organic agriculture. Topics covered include the history and the need for organic agriculture, fundamental organic farming practices, organic animal production, the National Organic Program, and economic and marketing considerations for organic products. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

AGR 280(3) **Course ID: 007424**
Livestock Management
Covers management practices involved in the production of swine, horses, cattle, sheep and goats. Emphasizes selection, reproduction, feeding, diseases, marketing, handling, and parasite control. Laboratory exercises teach and reinforce livestock management techniques. Pre-requisite: AGR 240 Introduction to Animal Science. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

AGS Agricultural Studies

AGS 115(3) **Course ID: 015713**
Agriculture Maintenance
Provides a study of basic maintenance issues (electrical, plumbing, fencing, building construction and repair, and safety) that arise in farming operations; and the practical troubleshooting and problem solving techniques. Lecture/Lab: 3.0 credits (75 contact hours).
Components: Lecture
Attributes: Technical

AGS 135(3) **Course ID: 015714**
Herbaceous Plant Production
Includes the identification, selection, requirements, care, and uses of herbaceous plant materials commonly found in food/agronomic production, including the scientific name and common pests. Annuals, perennials, bulbs, and grasses will be discussed. Lecture/Lab: 3.0 (60 contact hours).
Components: Lecture
Attributes: Technical

AGS 145(3) **Course ID: 015715**
Technology in Agriculture
Provides students with a basic introduction to the newest technological advancements in the agricultural industry, including the involvement of computer based applications and smart devices. Topics will include computer integrated management of agricultural operations, including livestock, crop, financial management, and recordkeeping. Additionally, equipment and farm monitoring technology and their integration with smart devices will be discussed. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

AGS 155(3) **Course ID: 015716**
Greenhouse Production
Designed to introduce students to the concept of controlled environment growing and plant management. Plant production will be used to demonstrate greenhouse techniques. Identification of diseases, insects, and plant disorders in the greenhouse will also be discussed. Plant and growth medium selection will also be components. An emphasis will be placed on plants for agricultural and food production. Pre-requisite: AGS 135 Herbaceous Plant Production. Lecture/Lab: 3.0 credits (75 contact hours)
Components: Lecture
Attributes: Technical

AGS 175(2) **Course ID: 015717**
Agriculture Marketing and Sales
Enables students to gain a fundamental knowledge of marketing and sales strategies, as they are directly related to the agriculture industry. A focus is placed on market research, management of your marketing, promotions, handling produce, packaging, distribution, customer relations and sales techniques. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

AGS 205(3) **Course ID: 015718**
Forage Management
Includes the study of the management, production, and utilization of forage grasses and legumes for harvested and grazed production. Subject areas will include varietals selection, planting, calculating yields, production costs, growth management, and harvesting techniques. Management will focus on annual and perennial legume and grass production. This course will emphasize establishment, winter survival, fertilization, cutting management, forage storage, and variety selection. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

AGS 215(3) **Course ID: 015719**
Weed Management
Examines the nature of crop/weed interactions and explores various weed control methods. Weed identification, biology, ecology and modern management principles are all explored in this course. Pre-requisite: AGR 250 Intro to Plants/Crop Production. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

AGS 225(3) **Course ID: 015720**
Fruit and Vegetable Production
Provides knowledge required for development of skills in the following areas: commercial vegetable production; variety selection; production methods; growth and development; harvesting; and pest control. Pre-requisite: AGR 250 Introduction to Plants/Crop Production. Lecture/Lab: 3.0 credits (75 contact hours).
Components: Lecture
Attributes: Technical

AGS 235(3) **Course ID: 015721**
Field Crop Production
Gain an understanding of the major U.S. field crops with emphasis on their growth requirements, development, uses, management, and physiology. Pre-requisite or Co-requisite: AGR 250 Intro to Plants/Crop Production. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

AGS 245(3) **Course ID: 015722**
Pest Management
Provides a study of agricultural pest control, including insects, diseases, and weeds, of common agricultural and horticultural crops. Management techniques will also be discussed, including chemical, biological, IPM, and organic methods. Pre-requisite: AGR 250 Intro to Plants/Crop Production. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

AGS 255(3) **Course ID: 015723**
Crop Scouting
Designed to give students a hands-on experience scouting crops to find and identify existing and potential problems related to crop growth and development, fertility, pest pressure, and similar yield reducers. Pre-requisite: AGS 235 Field Crop Production. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

AGS 265(2) **Course ID: 015724**
Agriculture Business and Records
Provides students with an introduction to farm business management and record keeping. Emphasis is placed on business structures, developing a business plan, budgeting and basic accounting principles, agriculture tax code, and record keeping. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

AGS 275(3) **Course ID: 015725**
Value Added Production
Provides students the knowledge and skills necessary to add economic value to raw farm products. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

AGS 285(3) **Course ID: 015726**
Farm Financial Management
Provides an overview of the basic concepts needed to understand commodity futures and option markets. Risks and rewards are discussed, as well as other topics needed to successfully trade in these markets. Pre-requisite: AGR 101 Economics of Food and Agriculture. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

AGS 295(1) **Course ID: 015727**
Agriculture Studies Capstone
Designed to be taken by the Agricultural Studies student in their final semester, as a programmatic review and course designed to bridge previous courses together. This course seeks to ensure students are ready to enter the workforce upon graduation as well as pass the capstone exam. Pre-requisite or Co-requisite: Sophomore Standing, Final Semester. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

AHS Allied Health

AHS 100(2) **Course ID: 001515**
Human Growth and Development
Course focus is on the promotion of health through assessment of individuals' growth and development across the life span. Consideration is given to the family, cultural, environmental, spiritual, and genetic influences when meeting basic human needs. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

AHS 105(3) **Course ID: 000037**
Introduction to Health Occupations
Basic health care concepts and skills for students interested in or planning a career in health care are introduced. Basic body mechanics, health care delivery systems, caregiver/client relationships, infection control, basic assessment skills, first aid, cardiopulmonary resuscitation certification, team-building skills and problem-based learning are included. Lecture: 2.5 credit hours (37.5 contact hours); Lab: .5 credit hours (30 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

AHS 109(4) **Course ID: 001516**
Introduction to Body Structure and Functions
Provides knowledge of the structure and function of the human body with emphasis on normalcy. Includes interaction of all body systems in maintaining homeostasis and promotes an understanding of health maintenance. Not intended as a general education science course. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: Technical

AHS 115(3) **Course ID: 003808**
Medical Terminology
A study of anatomical, physiological and pathological terminology with emphasis on work structures and definition of root words, suffixes, and prefixes from Greek and Latin. Additional emphasis is placed on spelling and pronunciation. Primarily designed for individuals preparing for a career in health care. No previous knowledge of Greek or Latin is required. Lecture: 3 hrs.
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

AHS 120(1) **Course ID: 001517**
Medical Terminology
Basic medical word techniques emphasizing anatomical, physiological and medical terms. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical

AHS 130(2) **Course ID: 001518**
Infection Control
Promotes an understanding of the effects of microorganisms on the human body. Includes standard precautions necessary for health maintenance and infection control, focusing on reducing the incidence of disease. Not intended as a general education science course. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

AHS 140(3) **Course ID: 005520**
Introduction to Public and Community Health
Introduces students to the management of public health emergencies. Topics include human epidemics and pandemics, agricultural and plant diseases, and emergency medicine. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

AHS 201(3) **Course ID: 002358**
Management Principles for Allied Health Providers
Many allied health practitioners will assume the role of a manager during the course of their career. This course is designed to provide theory and application focusing on the development of strategies and skills to assume professional responsibilities in management and administration. Lecture: 3 credits (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

AHS 203(3) **Course ID: 005479**
Diversity in Health Care
Introduces students to heath care consumers from various cultural backgrounds. Emphasizes the cultural heritage and diversity existing in contemporary society and cultural factors that affect nontraditional and underrepresented consumers' access to and use of health care resources. Broadens students' perception and understanding of health/illness and the variety of meanings these terms carry for members of differing sociocultural populations. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

AHS 1151(1) **Course ID: 016312**
Medical Terminology Word Roots
Emphasizes word structures and the definition of root words, suffixes, and prefixes from Greek and Latin. Lecture: 1 credit (15 contact hours).
Components: Lecture

AHS 1152(1) **Course ID: 016313**
Basic Elements of Terminology
Focuses on basic elements of medical words from Greek or Latin roots, together with additional emphasis on spelling and pronunciation. Pre-requisite: AHS 1151. Lecture: 1 credit (15 contact hours).
Components: Lecture

AHS 1153(1) **Course ID: 016314**
Advanced Word Roots & Systems
Focuses on advanced word structures and the definition of root words, suffixes, and prefixes from Greek and Latin that are related to human body structures; also includes the study of commonly used medical abbreviations. Pre-requisite: AHS 1152. Lecture: 1 credit (15 contact hours).
Components: Lecture

AIM Advanced Integrated Manufacturing

AIM 100(3) **Course ID: 016284**
Principles of Advanced Integrated Manufacturing
Introduces the founding principles/practices of manufacturing safety and health in a modern manufacturing environment. Covers current manufacturing quality control concepts and techniques used in industry with an emphasis on proper statistical methods and relevant software. Pre-requisite: Reading and math assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

AIM 110(3) **Course ID: 016285**
Manufacturing Processes and Materials
Covers modern manufacturing processes and materials in the production of contemporary consumer and industrial products with an emphasis on front-line manufacturing production. Pre-requisite: Reading and math assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

AIM 120(3) **Course ID: 016286**
Introduction to Modern Plastics Manufacturing
Introduces common plastic processing techniques, various plastic materials and practical safety requirements for common processing in a plastics manufacturing facility. Pre-requisite: Reading and math assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (30 contact hours)
Components: Laboratory, Lecture
Attributes: Technical

AIM 1001(1.5) **Course ID: 016583**
Basic Safety in Manufacturing
Introduces basic manufacturing safety and ergonomic techniques. Pre-requisites: Reading and math assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses. Lecture/Lab: 1.5 credits (30 contact hours)
Components: Lecture

AIM 1002(1.5) **Course ID: 016584**
Manufacturing With Quality
Introduces basic quality and auditing techniques as well as basic statistical tools used in the manufacturing environment. Pre-requisite: AIM 1001 or consent of instructor. Lecture/Lab: 1.5 credits (30 contact hours)
Components: Lecture

AIM 1101(1) **Course ID: 016585**
Industrial Materials and Safety
Addresses safety in a traditional and CNC machining environment and introduces industrial materials and their properties. Pre-requisite: Reading and math assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses. Lecture/Lab: 1.0 credits (20 contact hours)
Components: Lecture

AIM 1102(1) **Course ID: 016586**
Metal Removal and Metrology
Introduces the science of measurement and metal removal fundamentals for various industrial processes and materials. Pre-requisites: AIM 1101. Lecture: 1.0 credit (20 contact hours).
Components: Lecture

AIM 1103(1) **Course ID: 016588**
CNC-Nontraditional Machining
Introduces different types of nontraditional machining and CNC (G and M) coding used to control nontraditional machining. Pre-requisites: AIM 1101 or consent of instructor. Lecture/Lab: 1.0 credits (20 contact hours)
Components: Lecture

AIM 1201(1) **Course ID: 016589**
Introduction to Plastics
Introduces polymers and the plastic industry. Includes safety in the plastic manufacturing environment as well as the history of plastic polymers and industry advancements. Pre-requisite: Reading and math assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses. Lecture: 1.0 credit (20 contact hours).
Components: Lecture

AIM 1202(1) **Course ID: 016590**
Plastic Formulation and Design
Presents the different polymer formulations (polymerization) and applications. Discusses product considerations, design for manufacturability(DFM) and extrusion. Pre-requisite: AIM 1201 or Consent of Instructor. Lecture/Lab: 1.0 credits (20 contact hours)
Components: Lecture

AIM 1203(1) **Course ID: 016591**
Plastic Molding Processes
Presents the industry standards and process techniques of thermoforming, injection molding and laminating. Discusses different types of plastic resin and the proper handling and preparation for production. Pre-requisite: AIM 1202 or Consent of Instructor. Lecture/Lab: 1.0 credit (20 contact hours).
Components: Lecture

AIT Advanced Integrated Technology

AIT 100(4) **Course ID: 005955**
Power Generation and Utilization
Introduces electrical, hydraulic, and pneumatic power systems used in industry. Provides theory and application of DC and AC, including three-phase power and theory and application of hydraulic and pneumatic power utilizing basic circuits. Prerequisite: Reading and Mathematics assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses. Lecture/Lab: 4 credits (90 contact hours). (30:1 Ratio Lab).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

AIT 110(3) **Course ID: 005956**
Power Distribution Systems
Provides instruction in the use of electrical, hydraulic, and pneumatic power as it applies in industry. Covers AC/DC circuit analysis, single-phase and three-phase power including hydraulic and pneumatic power and basic principles of pressure and flow. Prerequisite: AIT 100 or consent of instructor. Lecture/Lab: 3 credits (67.5 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

AIT 120(3) **Course ID: 005957**
Equipment Installation
Focuses on the installation of electrical, hydraulic, and pneumatic industrial systems. Emphasizes motor installation, wiring/box selection, conduit preparation and installation, hydraulic/pneumatic supply, piping, controls, and various lifting and rigging techniques. Prerequisite: Reading assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses. Lecture/Lab: 3 credits (75 contact hours). (30:1 Ratio Lab).
Components: Lecture
Attributes: Course Also Offered in Modules

AIT 130(4) **Course ID: 005958**
Measurement and Instrumentation
Covers measurement and instrumentation concepts and applications, choice of proper instrumentation and calibration, manual and automated measurement processes. Prerequisite: MT 120 or higher. Lecture/Lab: 4 credits (90 contact hours). (30:1 Ratio).
Components: Lecture
Attributes: Course Also Offered in Modules

AIT 135(3) **Course ID: 007384**
Industrial Refrigeration - I
Presents refrigeration fundamentals and associated components for individuals interested in safe, effective, and efficient maintenance and operation of industrial refrigeration equipment who may also be seeking RETA credentialing. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

AIT 160(1) **Course ID: 005961**
Workplace Safety
Focuses on industrial safety practices. Includes personal safety and equipment, hazard recognition, and safeguards. Covers electrical safety procedures and hazardous materials. Emphasizes OSHA rules and regulations. Prerequisite: Reading assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses. Lecture: 1 credit (15 contact hours),
Components: Lecture
Attributes: Technical

AIT 190(3) **Course ID: 006561**
Integrated Power Plant Operations
Introduces students to main components found within a fossil power plant. Provides in-depth study of following systems: cooling water system, steam flow system, air flow system, gas flow system, and power distribution. Provides instruction in the integration of systems within a fossil fuel power plant. (Reading and Mathematics assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses) OR instructor consent. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

AIT 200(4) **Course ID: 005963**
Process Management and Quality Control
Emphasizes project team organization. Introduces the following concepts: cycle time, production time, first pass yield, and barrier identification. Introduces quality control including understanding acceptance criteria with tolerances, data collection, and data reporting. Prerequisite: AIT 130 or Consent of Instructor. Lecture/Lab: 4 credits (90 contact hours). (30:1 Ratio Lab).
Components: Lecture
Attributes: Course Also Offered in Modules

AIT 210(4) **Course ID: 005964**
Advanced Equipment Maintenance
Focuses on maintenance techniques and procedures used with advanced and highly technical industrial machinery, including lubrication, V-belt and shaft drives, couplings, chain drives, bearings and seals, brakes and clutches, machine vibration and analysis, laser alignment, and troubleshooting techniques. Emphasizes the use of hand tools and precision measuring instruments. Prerequisite: Reading and Mathematics assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses or consent of instructor. Lecture/Lab: 4 credits (90 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

AIT 220(3) **Course ID: 006565**
The Integrated Power Grid
Introduces students to types of power plants that are tied to the electric grid other than fossil power plants. Provides overviews of nuclear, hydro, and many forms of renewable energy. Includes forms of alternative energy power plants such as solar, wind, and bio-mass power plants. Lecture: 3.0 (45 contact hours)
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

AIT 230(3) **Course ID: 006569**
Integrated Power Plant Operations
Introduces students to main components found within a fossil power plant. Provides in-depth study of following systems: cooling water system, steam flow system, air flow system, gas flow system, and power distribution. Provides instruction in the integration of systems within a fossil fuel power plant, and preparatory instruction for the Edison Electrical Institute Examination. Pre-requisite: AIT 220 or Consent of Instructor. Lecture: 3.0 (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

AIT 235(3) **Course ID: 007385**
Industrial Refrigeration - II
Offers a second level detailed presentation of primary components and systems utilized within industrial refrigeration plants for individuals interested in safe, effective, and efficient maintenance and operation of industrial refrigeration equipment who may also be seeking RETA credentialing. Pre-requisite: AIT135. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

AIT 240(4) **Course ID: 006573**
Analysis of National Electrical Code Development and Structure
Prepares students to take examination for electrical license and employer testing through understanding of content contained in the National Electrical Code. Pre-requisite: Reading assessment score at level of RDG 20 or successful completion of developmental courses prior to RDG 020. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

AIT 250(5) **Course ID: 006574**
Application of the National Electrical Code for Residential Wiring
Applies articles of National Electrical Code to residential wiring. Pre-requisite: AIT 240 or consent of instructor. Lecture/Lab/ Practicum: 5.0 credits (165 contact hours).
Components: Laboratory, Lecture, Practicum
Attributes: Technical

AIT 270(2) **Course ID: 006942**
Introduction to Robotics and Programmable Logic Controllers
Examines fundamental architecture of programmable logic controllers as it pertains to industrial application and incorporates ladder logic principles, commonly used instruction language, editing, program navigation and program analysis. Includes the fundamentals of 6-axis robotics including manual manipulation, execution of existing robotic program file, modification of target parameters, and safety interlocks. Pre-requisite: AIT 1501 or Consent of Instructor. Lecture/Lab: 2.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

AIT 290(0.1 - 5) **Course ID: 005965**
Instructor Consent Required
Selected Topics in Advanced Integrated Technology
Includes selected topics in integrated technology, due to rapidly changing technology or in response to local needs. Covers topics which may vary from semester to semester at the discretion of the instructor. May repeat course with different topics to a maximum of five credit hours. Prerequisite: Consent of instructor. Lecture/Lab: Varies by topic.
Components: Lecture
Attributes: Technical

AIT 299(4) **Course ID: 007386**
Advanced Electromechanical Concepts
Investigates advanced concepts in electromechanical engineering. Includes advanced concepts in fluid power, motor controls, instrumentation, and automation controls. Required for students in the Advanced Integrated Technology program who want to pursue the Bachelor of Science Electromechanical Engineering Technology transfer agreement with Murray State University. Prerequisite: AIT 1501 or consent of instructor. Lecture/Lab: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

AIT 1001(2) **Course ID: 006150**
Basic Electrical Knowledge
Introduces electrical power systems used in industry. Provides introductory theory and application of DC/AC circuits, control transformers, and operation of DC power supplies. Prerequisite: Reading and Mathematics assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses or consent of instructor. Lecture/Lab: 2 credits (45 contact hours).
Components: Lecture

AIT 1002(1) **Course ID: 006151**
Power Development
Introduces electrical power systems used in industrial settings, including basic theory and application of DC generators, alternators, and electric motors. Prerequisite: Reading assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses or completion of AIT 1001 or consent of instructor. Lecture/Lab: 1 credit (22.5 contact hours).
Components: Lecture

AIT 1003(1) **Course ID: 006152**
Hydraulic/Pneumatic Fundamentals
Introduces basic theory and application of hydraulic and pneumatic industrial power systems. Prerequisite: Reading assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses or completion of AIT 1002 or consent of instructor. Lecture/Lab: 1 credit (22.5 contact hours).
Components: Lecture

AIT 1101(1) **Course ID: 006153**
Electrical Power Distribution
Provides instruction in the use of electrical power as it applies in industry. Includes AC/DC circuit analysis, AC power generation and three-phase distribution systems, and transformers. Prerequisite: AIT 100 or consent of instructor. Lecture/Lab: 1.0 credits (22.5 contact hours).
Components: Lecture

AIT 1102(2) **Course ID: 006154**
Fluid Power Distribution
Provides instruction in the use of hydraulic and pneumatic power as it applies to industry. Includes basic principles of pressure and flow, basic hydraulic/pneumatic circuits including pumps, valves, cylinders, and motors. Prerequisite: Reading assessment scores above KCTCS developmental placement level; or successful completion of prescribed developmental courses; or AIT1101; or consent of instructor. Lecture/Lab: 2.0 credit (45 contact hours).
Components: Lecture

AIT 1201(1) **Course ID: 006155**
Electrical Installation
Focuses on the installation of electrical industrial systems, including print reading, wiring/box selection, component installation, raceways and conduit, control wiring, and wiring techniques. Prerequisite: Reading assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses or consent of instructor. Lecture/Lab: 1 credit (25 contact hours).
Components: Lecture

AIT 1202(1) **Course ID: 006156**
Piping, Pneumatic, & Installation
Focuses on the installation of pneumatic industrial systems, including interpretation of drawings and diagrams, fabrication of pipe and pipefittings, pneumatic supply lines, piping safety, and pipe installation for pneumatic systems. Prerequisite: AIT 1201 or consent of instructor. Lecture/Lab: 1 credit (25 contact hours).
Components: Lecture

AIT 1203(1) **Course ID: 006157**
Mechanical Installation
Includes motor and machine mounting, speed, torque, power measurement, and various lifting and rigging techniques. Prerequisite: Reading assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses or consent of instructor. Lecture/Lab: 1 credit (25 contact hours).
Components: Lecture

AIT 1301(2) **Course ID: 006158**
Principles of Instrumentation
Introduces measurement and instrumentation concepts and applications by examining the four main components of instrumentation: temperature, pressure, flow, and level. Prerequisite: (MT 120 or higher) OR consent of instructor. Lecture/Lab: 2.0 credit (45.0 contact hours).
Components: Lecture

AIT 1302(2) **Course ID: 006159**
Integrated Process Control
Covers measurement and instrumentation concepts and applications and introduces the concept of loop controls and the proper calibration of loops. Examines the importance of PID controllers in a control loop. Prerequisite: (MT 120 or higher) OR consent of instructor. Lecture/Lab: 2 credits (45 contact hours).
Components: Lecture

AIT 1401(2) **Course ID: 006161**
Basic Electrical Controls
Provides instruction in the integrated application of basic electrical controls including electrical motor controls with starting, reversing, and stopping devices. Prerequisite: AIT 100 or AIT 1001 or consent of instructor. Lecture/Lab: 2 credits (45 contact hours).
Components: Lecture

AIT 1402(1) **Course ID: 006162**
Basic Pneumatic Controls
Introduces the student to pneumatic speed control circuits. Uses air pressure regulators and flow controls to obtain cylinder speeds. Prerequisite: AIT 100 or AIT1003 or consent of the instructor. Lecture/Lab: 1 credit (22.5 contact hours).
Components: Lecture

AIT 1403(1) **Course ID: 006163**
Basic Hydraulic Controls
Provides instruction in hydraulic speed and pressure control; includes flow control valves, metering circuits, pressure reducing valves, and sequence valves. Prerequisite: AIT 100 or AIT 1003 or consent of the instructor. Lecture/Lab: 1 credit (22.5 credit hours).
Components: Lecture

AIT 1501(2) **Course ID: 006164**
Intermediate Electrical Controls
Provides instruction in the integrated application of advanced industrial controls for electrical systems. Emphasizes variable frequency drives, proximity sensors, SCR speed controls. Prerequisite: AIT140 or AIT1401 or consent of instructor. Lecture/Lab: 2 credits (45 contact hours).
Components: Lecture

AIT 1502(1) **Course ID: 006165**
Intermediate Pneumatic Controls
Provides instruction in the integrated application of advanced industrial controls for pneumatic systems. Emphasizes pneumatic logic circuits. Prerequisite: AIT 140 or AIT 1402 or consent of instructor. Lecture/Lab: 1 credit (22.5 contact hours).
Components: Lecture

AIT 1503(1) **Course ID: 006166**
Intermediate Hydraulic Controls
Provides instruction in the integrated application of advanced industrial controls for hydraulic circuits. Emphasizes hydraulic synchronization circuits and multi-pressure circuits. Prerequisite: AIT 140 or AIT 1403 or consent of instructor. Lecture/Lab: 1 credit (22.5 contact hours).
Components: Lecture

AIT 1901 (1) **Course ID: 006562**
Water and Steam Systems
Provides instruction in the main components and integration of water and steam systems within a fossil fuel power plant. (Reading and Mathematics assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses) OR consent of instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

AIT 1902(1) **Course ID: 006563**
Air and Gas Flows
Provides instruction in the main components and integration of air and gas flows within a fossil fuel power plant. (Reading and Mathematics assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses) OR consent of instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

AIT 1903(1) **Course ID: 006564**
Power Distribution
Provides instruction in the main components and integration of the power distribution of a fossil fuel power plant. (Reading and Mathematics assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses) OR consent of instructor. Lecture: 1.0 credits (15 contact hours). Component: Lecture

AIT 2001(2) Course ID: 006167 04-JAN-2010
Integrated Process Management
Emphasizes project team organization. Introduces the following concepts: cycle time, production time, first pass yield, and barrier identification. Prerequisite: AIT 130 or Consent of Instructor. Lecture/Lab: 2 credits (45 contact hours).
Components: Lecture

AIT 2002(2) **Course ID: 006168**
Quality Control and SPC
Introduces quality control including understanding acceptance criteria with tolerances, data collection, and data reporting. Prerequisite: AIT 130 or Consent of Instructor. Lecture/Lab: 2 credits (45 contact hours).
Components: Lecture

AIT 2101(1) **Course ID: 006169**
Predictive/Preventive Maintenance and Lubrication
Focuses on maintenance techniques and procedures used with advanced and highly technical industrial machinery. Prerequisite: Reading and Mathematics assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses or consent of instructor. Lecture/Lab: 1.0 credits (22.5 contact hours).
Components: Lecture

AIT 2102(1) **Course ID: 006170**
Power Transmission Systems
Focuses on maintenance techniques and procedures used with advanced and highly technical industrial machinery including v-belt and shaft drives, couplings, chain drives, bearings and seals, brakes and clutches. Prerequisite: Reading and Mathematics assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses or consent of instructor. Lecture/Lab 1.0 credit (22.5 contact hours).
Components: Lecture

AIT 2103(2) **Course ID: 006171**
Advanced Mechanical
36Focuses on troubleshooting techniques necessary for advanced and highly technical industrial machinery. Prerequisite: Reading and Mathematics assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses or consent of instructor. Lecture/Lab: 2.0 credits (45 contact hours).
Components: Lecture

AIT 2701(1) **Course ID: 006943**
Introduction to PLCs
Examines fundamental architecture of programmable logic controllers as it pertains to industrial applications and incorporates ladder logic principles, commonly used instruction language, editing, program navigation and program analysis. Pre-requisite: AIT 1501 or Consent of Instructor. Lecture/Lab: 1.0 credit (22.5 contact hours).
Components: Lecture

AIT 2702(1) **Course ID: 006944**
Introduction to Robotics
Investigates underlying principles, applications and fundamentals of 6-axis robotics including manual manipulation, execution of existing robotic program file, modification of target parameters, and safety interlocks. Pre-requisite: AIT 2701. Lecture/Lab: 1.0 credit (22.5 contact hours).
Components: Lecture

AMS American Military Studies

AMS 101(2) **Course ID: 000907**
Introduction to the Army
This introductory level course is designed to give students an appreciation for the role the Army currently plays in our society. The course covers the history of the Army and the roles and relationships of the Army within our society. The course also covers some of the basic skills necessary for today's leaders to include oral presentation, time management, map reading, basic rifle marksmanship and squad tactics.
Components: Lecture
Attributes: Technical

AMS 102(2) **Course ID: 000782**
Introduction to Leadership
This course is designed to acquaint the student with the fundamental skills necessary to be a leader, both in military and civilian context. Course also covers basic military map reading skills. Prerequisites: None.
Components: Lecture
Attributes: Other

AMS 211(2) **Course ID: 004854**
Advanced Leadership I
This course focuses on both theoretical and practical aspects of leadership. Students will examine topics such as written and oral communication, effective listening, assertiveness, personality, adult development, motivation, and organizational culture and change. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

AMS 250(1) **Course ID: 005380**
Basic Military Science Lab
A hands-on practicum which exposes the student to the military skills required for basic technical and tactical competence to enter the Advanced Course. Laboratory, two hours per week and two week-end exercises. May be repeated to a maximum of four credits. Practicum: 1 credit (32 contact hours).
Components: Practicum
Attributes: Technical

AMT Aviation Maintenance Technology

AMT 100(1) **Course ID: 004348**
Mathematics
Instruction on the aerodynamic and physical forces acting on an aircraft in flight to be taught by lecture, demonstrations, worksheets and reading assignments. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (75:1 ratio/ 37 contact hours) Prerequisite: CPU 150 or CIS 100 or GE 150 or Consent of Instructor
Components: Lecture
Attributes: Technical

AMT 102(1) **Course ID: 004350**
Aircraft Weight and Balance
Teaches knowledge and skills necessary in measuring, calculating, and documenting aircraft weight and balance. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (75:1 ratio/37 contact hours) Prerequisite: CPU 150 or CIS 100 or GE 150 or Consent of Instructor.
Components: Lecture
Attributes: Technical

AMT 103(1) **Course ID: 004351**
Cleaning and Corrosion Control
Provides instruction in the identification, cause, prevention, removal and treatment of corrosion. Also, includes interior and exterior cleaning of the aircraft. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (75:1 ratio/37 contact hours) Prerequisite: CPU 150 or CIS 100 or GE 150 or Consent of Instructor.
Components: Lecture
Attributes: Technical

AMT 104(1) **Course ID: 004352**
Basic Electricity
Provides instruction in basic electricity theory, concepts, components, physics, meter operation and use, battery construction and servicing. Will be taught by lecture, demonstrations, worksheets and reading assignments. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credit (90:1 ratio/45 contact hours) Prerequisite: CPU 150 or CIS 100 or GE 150 or Consent of Instructor
Components: Lecture
Attributes: Technical

AMT 105(1) **Course ID: 004353**
Fluid Lines and Fittings
Provides an understanding of basic hydraulic functions, the fabrication of tubing and flex hoses as well as seal comparability. Taught by lectures, demonstrations, worksheets, reading assignments and projects. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (45:1 ratio/22 contact hours) Prerequisite: CPU 150 or CIS 100 or GE 150 or Consent of Instructor
Components: Lecture
Attributes: Technical

AMT 106(1) **Course ID: 004354**
Aircraft Drawing and Blueprint Reading
Provides instruction in reading and interpretation of basic industrial and aircraft blue prints. This is taught by lecture, demonstration, worksheet, reading assignments and projects. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credit (45:1 ratio/22 contact hours) Prerequisite: CPU 150 or CIS 100 or GE 150 or Consent of Instructor
Components: Lecture
Attributes: Technical

AMT 107(1) **Course ID: 004355**
Physics
Provides instruction in basic principles of physics as related to aviation maintenance. This is taught by lecture, demonstration, worksheet, reading assignments and projects. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (45:1 ratio/22 contact hours) Prerequisite: CPU 150 or CIS 100 or GE 150 or Consent of Instructor
Components: Lecture
Attributes: Technical

AMT 108(1) **Course ID: 004356**
Ground Handling and Servicing
Basic handling and ground service techniques of the aircraft taught by lecture, demonstrations, worksheets and reading assignments. Lecture: 0.5 credits (8 contact hours). Lab: 0.5 credits (45:1 ratio/22 contact hours). Prerequisite: CPU 150 or CIS 100 or GE 150 or Consent of Instructor
Components: Lecture
Attributes: Technical

AMT 109(1) **Course ID: 004357**
Maintenance Publications
Instruction in the use of maintenance publications is taught by lecture, demonstrations, worksheets and reading assignments. Lecture: 0.5 credit (8 contact hours) Lab: 0.5 credit (15:1 ratio/7 contact hours) Prerequisite: CPU 150 or CIS 100 or GE 150 or Consent of Instructor
Components: Lecture
Attributes: Technical

AMT 111(1) **Course ID: 004358**
Mechanic Privileges and Limitations
Instruction in aircraft mechanic privileges and limitations is taught by lecture, demonstrations, worksheets and reading assignments. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (15:1 ratio/7 contact hours) Prerequisite: CPU 150 or CIS 100 or GE 150 or Consent of Instructor
Components: Lecture
Attributes: Technical

AMT 112(1) **Course ID: 004359**
Maintenance Forms and Records
Instruction in the use and completion of required forms and records is taught by lecture, demonstrations, worksheets and reading assignments. Lecture: 0.5 credit (8 contact hours) Lab: 0.5 credit (15:1 ratio/7 contact hours) Prerequisite: CPU 150 or CIS 100 or GE 150 or Consent of Instructor
Components: Lecture
Attributes: Technical

AMT 113(1) **Course ID: 004360**
Materials and Processes
Instruction in structural inspection, materials and fasteners, and repair methods is taught by lecture, demonstrations, worksheets and reading assignments. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (120:1 ratio/60 contact hours) Prerequisite: CPU 150 or CIS 100 or GE 150 or Consent of Instructor
Components: Lecture
Attributes: Technical

AMT 205(1) **Course ID: 004363**
Non-Metallic Structures
Provides instruction in the inspection, service, and repair of metal and composite aircraft structures, including laminated and honeycomb structures, plastic materials, interior furnishings and access openings. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (45:1 ratio/22 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater.
Components: Lecture
Attributes: Technical

AMT 211(1) **Course ID: 004366**
Aircraft Finishes
Provides instruction in the identification, application and inspection of aircraft finishing materials. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (45:1 ratio/22 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater.
Components: Lecture
Attributes: Technical

AMT 215(1) **Course ID: 004368**
Airframe Inspection
Instruction includes inspection of airframes to determine airworthiness. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (45:1 ratio/22 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater.
Components: Lecture
Attributes: Technical

AMT 223(1) **Course ID: 004370**
Aircraft Landing Gear Systems
Inspect, check, service and repair landing gear, retraction systems, shock struts, bakes, wheels, tires, and steering system. Instruction provided by lecture, demonstration, and practical projects. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (90:1 ratio/45 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater.
Components: Lecture
Attributes: Technical

AMT 225(2) **Course ID: 004477**
Aircraft Electrical Systems
Checking, inspecting, troubleshooting and repair of aircraft electrical system and system components are included. Instruction is provided by lecture, demonstration, and practical projects. Lecture: 0.5 credits (8 contact hours) Lab: 1.5 credits (75:1 ratio/112 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater
Components: Lecture
Attributes: Technical

AMT 229(1) **Course ID: 004372**
Aircraft Fuel Systems
Checking, inspection, servicing, repair and troubleshooting fuel systems and components are covered. Types of fuels used in various aircraft. Discussion of the problems associated with fueling and various techniques in fueling are included. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (90:1 ratio/45 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater.
Components: Lecture
Attributes: Technical

AMT 231(1) **Course ID: 004373**
Cabin Atmospheric Control Systems
Checking, inspection, servicing, repair, and troubleshooting of the heating, cooling, air conditioning, pressurization, and oxygen systems are included. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (45:1 ratio/22 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater.
Components: Lecture
Attributes: Technical

AMT 239(1) **Course ID: 004376**
Aircraft Instrument Systems
Check, inspect and troubleshoot the pitot/static system, floating compass system and the gyros used for flight instruments. Discussion of the role of mechanics when working with precision instruments is included. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (15:1 ratio/7 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater.
Components: Lecture
Attributes: Technical

AMT 241(4) **Course ID: 004377**
Turbine Engines
Construction, repair and overhaul of turbine engines is included. Lecture: 2 credits (30 contact hours) Lab: 2 credits (60:1 ratio/120 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater.
Components: Lecture
Attributes: Technical

AMT 243(3) **Course ID: 004378**
Reciprocating Engine Theory and Operation
Theory and development of the aircraft internal combustion engine as well as instruction in the use of engine construction and repair are covered. Lecture: 0.5 credits (8 contact hours) Lab: 2.5 credits (45:1 ratio/112 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater.
Components: Lecture
Attributes: Technical

AMT 245(1) **Course ID: 004379**
Engine Inspection
The operation and inspection of turbine engines is covered. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (45:1 ratio/22 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater.
Components: Lecture
Attributes: Technical

AMT 247(4) **Course ID: 004380**
Reciprocating Engine Overhaul
Inspection, checking, servicing and the repair of opposed and radial engines and reciprocating engine installation will be taught by lecture, demonstration, student feedback and participation. Lecture: 2 credits (30 contact hours) Lab: 2 credits (60:1 ratio/120 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater.
Components: Lecture
Attributes: Technical

AMT 251(1) **Course ID: 004381**
Engine Fuel System Components
Operation, inspection and repair of fuel systems and components of aircraft fuel systems, by reading assignments, worksheets, lecture, demonstration and practical projects. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credit (15:1 ratio/7 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater.
Components: Lecture
Attributes: Technical

AMT 253(1) **Course ID: 004382**
Engine Fuel Metering Systems
Operation, inspection and repair of fuel metering systems are taught by reading assignments, worksheets, lecture, demonstration and practical projects. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credit (75:1 ratio/37 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater.
Components: Lecture
Attributes: Technical

AMT 255(1) **Course ID: 004383**
Induction Systems
Inspection, checking, troubleshooting, servicing and repair of engine ice and rain control systems, heat exchangers, superchargers, carburetor air intake and induction manifolds are taught by reading assignments, worksheets, lecture, demonstration and practical projects. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (45:1 ratio/22 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater.
Components: Lecture
Attributes: Technical

AMT 257(1) **Course ID: 004384**
Engine Cooling Systems
Inspection and repair of engine cooling system components are taught by reading assignments, worksheets, lecture, demonstration and practical projects. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credit (15:1 ratio/7 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater.
Components: Lecture
Attributes: Technical

AMT 259(1) **Course ID: 004385**
Engine Exhaust Systems
Inspection and repair of engine exhaust system components are taught by reading assignments, worksheets, lecture, demonstration and practical projects. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credit (15:1 ratio/7 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater.
Components: Lecture
Attributes: Technical

AMT 261(1) **Course ID: 004386**
Engine Instrument Systems
Troubleshooting, servicing and repair of fluid rate of flow indicating systems and repair of engine temperature, pressure, and r.p.m. indicating systems are taught by reading assignments, worksheets, lecture, demonstration and practical projects. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credit (15:1 ratio/7 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater.
Components: Lecture
Attributes: Technical

AMT 263(1) **Course ID: 004387**
Fire Protection Systems
Inspecting, checking, servicing, troubleshooting, and repair of engine fire detection and extinguishing systems are taught by reading assignments, worksheets, lecture, demonstration and practical projects. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credit (15:1 ratio/7 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater.
Components: Lecture
Attributes: Technical

AMT 265(2) **Course ID: 004388**
Engine Electrical Systems
Repair of engine electrical system components, and to install, check, and service engine electrical wiring, controls, switches, indicators, and protective devices by lecture, reading assignments, demonstration and practical projects. Lecture: 1 credit (15 contact hours) Lab: 1 credit (60:1 ratio/60 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater.
Components: Lecture
Attributes: Technical

AMT 267(1) **Course ID: 004389**
Engine Ignition Systems
Operation and overhaul of magneto and ignition harness; repair of engine ignition system components; and inspect, check, service, troubleshoot, and repair reciprocating and turbine engine ignition systems by lecture, reading assignments, worksheets, demonstration and practical projects. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (120:1 ratio/60 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater.
Components: Lecture
Attributes: Technical

AMT 269(1) **Course ID: 004390**
Lubrication Systems
Purpose, use, and selection of lubricants; repair engine lubrication system components; and inspect, check, service, troubleshoot and repair engine lubrication systems taught by lecture, reading assignments, worksheets, demonstration and practical projects. Lecture: 0.5 credits (8 contact hours) Lab: 0.5 credits (150:1 ratio/75 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater.
Components: Lecture
Attributes: Technical

AMT 271(1) **Course ID: 004391**
Propellers
Inspection, checking, servicing, and repair of propeller synchronizing and ice control systems are included. Students will identify and select propeller lubricants, balance propellers, and repair propeller control system components. Inspection, checking, servicing, and repair of fixed-pitch, constant-speed, and feathering propellers and propeller governing systems is also included. Installation, troubleshooting and the removal of propellers is covered. This class is taught by lecture, reading assignments, worksheets, demonstration and practical projects. Lecture: 0.5 credits (7 contact hours) Lab: 0.5 credits (120:1 ratio/60 contact hours) Prerequisite: AMT 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, and 113. All AMT courses must be achieved with a grade of "C" or greater.
Components: Lecture
Attributes: Technical

ANA Anatomy and Neurobiology

ANA 209(3) **Course ID: 004701**
Principles of Human Anatomy
The structure of the human body will be examined at various levels: cellular, tissues and organ systems. The gross anatomical arrangement of the body will be studied in a system-by-system format relating structure to function and the fundamentals of human embryology/malformation with adult anatomy. The central nervous system will be emphasized. Prerequisite: Introductory biology or zoology. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

ANT Anthropology

ANT 101(3) **Course ID: 004855**
Introduction to Anthropology
Introduces the student to the study of human cultures, past and present. Offers a comprehensive introduction to anthropology, emphasizing the concepts and methods of the major sub-fields i.e., cultural, biological, archaeology, and linguistics. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

ANT 130(3) **Course ID: 000044**
Introduction to Comparative Religion
Introduces students to a comparative analysis of world religions, emphasizing beliefs, rituals, artistic expressions, and cultural and social organization. Includes both Eastern and Western religions. (Same as ANT 130). Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: REL 130
Attributes: Cultural Studies, AH - Arts and Humanities, SB - Social Behavior Science

ANT 160(3) **Course ID: 002204**
Cultural Diversity in the Modern World
Introduces the student to the diversity of human cultural experience in the contemporary world. Focuses on gaining an appreciation for the common humanity and uniqueness of all cultures; creating sensitivity toward stereotypes and ethnocentrism, and understanding the distinctions between 'race', ethnicity and racism. Features extended descriptions of the cultural dynamics of the culture(s) with which the instructor has worked. Directed at non-majors.
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

ANT 220(3) **Course ID: 000043**
Introduction to Cultural Anthropology
Examines variations in beliefs, behaviors, and institutions of different peoples. Acquaints the student with knowledge of how anthropological concepts and knowledge are used to understand and appreciate cultural diversity. Prerequisite: ACT, COMPASS, or ASSET scores for college level reading OR completion of developmental reading courses.
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

ANT 221(3) **Course ID: 002196**
Native People of North America
Surveys the aboriginal Native American cultures of North America, and of the impact of four centuries of British, French, Spanish and Russian contact on the Indian communities. Consider the status of Native Americans in present-day North America. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

ANT 223(3) **Course ID: 007065**
Culture Change and Globalization
Introduces the historical development of anthropology, its role in colonialism and globalization, and types of cultural change processes. Includes discussions of how human societies have struggled for political and economic identity in a post-colonial world and for cultural survival and self-determination. Pre-requisite: ACT, COMPASS, or ASSET scores for college level reading or completion of developmental reading courses. Lecture: 3.0 credit hours (45 contact hours).
Components: Lecture
Attributes: Other

ANT 235(3) **Course ID: 002205**
Food and Culture
Examines the way values and behaviors related to food production and consumption are shaped by the physical and cultural environment. Draws data from non-Western and Western cultures. Discusses implications of cultural factors for contemporary issues in nutrition. Prerequisite: ACT, COMPASS, or ASSET scores for college level reading OR completion of developmental reading courses. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

ANT 240(3) **Course ID: 002206**
Introduction to Archaeology
Introduces the theories, techniques, and strategies used by archaeologists to recover and interpret information about past cultures. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: Other

ANT 241(3) **Course ID: 000045**
Origins of Old World Civilization
Surveys cultural developments in the Old World from the earliest times to the beginning stages of civilization. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

ANT 242(3) **Course ID: 000046**
Origins of New World Civilization
Surveys the origin and growth of prehistoric Native American cultures as revealed by archaeological data. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

APS Apprenticeship Studies

APS 201(20 - 40) **Course ID: 000048**
Apprenticeship Studies
Complements specialized study in a national or state approved apprentice curriculum (i.e. 2000 hours per year on the job in a supervised work environment and 144 hours per year of related classroom instruction). Prerequisites: Completion of national/state certified apprenticeship program. Lecture/Lab: 20-40 credit hours (144 contact hours).
Components: Lecture
Attributes: Technical

APT Applied Process Technology

APT 102(4) **Course ID: 004540**
Process Fundamentals
Presents fundamental knowledge necessary for process operations. Develops an understanding of the basic principles of process operations. Covers the fundamental areas of physics, chemistry, and mathematics necessary to understand their complex relationship in industry. Includes topics on fluid behavior, fluid in motion, piping and valves, and the laws and nature of heat. Prerequisite: Test at MAT126 eligible or MAT 065 or Consent of Instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (120 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

APT 104(3) **Course ID: 004537**
Rotating and Reciprocating Equipment
Presents fundamental knowledge necessary for process operations and entry-level maintenance personnel. Develops an understanding of mechanical energy and the way it is put to use in industrial applications. Covers various forms of energy and how this energy can be converted to perform work. Includes topics on operating instructions, basic troubleshooting skills, and basic maintenance skills typically performed by personnel on pumps, compressors, and prime movers. Prerequisite: Test at MAT126 eligible or MAT 065 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Laboratory: 2.0 credits (120 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

APT 106(2) **Course ID: 004538**
Process Chemistry
Presents fundamental knowledge of chemistry necessary for process operations. Focuses on the basics of chemistry as they apply to water treatment and hydrocarbon processing. Includes, but are not limited to: basic chemical terminology, molecular formulas, structural formulas, common chemical symbols, and the chemical nature of the operator's job, work environment, and products. Prerequisite: Test at MAT126 eligible or MAT 065 or Consent of Instructor. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

APT 108(2) **Course ID: 004539**
Stationary Equipment
Presents fundamental knowledge in the operation and troubleshooting of stationary equipment. Provides a solid foundation on which to build sound maintenance and operations programs. Covers common equipment designs, operating instructions, troubleshooting aids to help identify malfunctions, guides to handling emergency situations and routine scheduled maintenance tasks. Includes topics on heat exchangers, heat transfer, cooling towers, and refrigeration. Prerequisite: Test at MAT126 eligible or MAT 065 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

APT 142(4) **Course ID: 004541**
Instrumentation
Develops an understanding of how to control and operate processes. Involves work on real life simulators to insure an understanding of process operations has been achieved. Includes measurement fundamentals and control strategies as applied to unit operations, industrial chemical operations, and operating tactics and strategies. Provides basic instruction in process control instrumentation as it relates to the manufacturing operations and will promote smoother, more efficient control of automated systems. Prerequisite: APT 108 with a grade of "C" or greater OR Instructor Consent. Lecture/Lab: 4.0 credits (105 contact hours).
Components: Lecture
Attributes: Technical

APT 144(4) **Course ID: 004542**
Process Operations
Develops an understanding of modern processing techniques, practical examples of normal and abnormal operating situations, and advanced training in enhancing productivity while cutting operating costs. Provides maintenance personnel and technicians an understanding of the overall process and their roles in maintaining efficient production rates. Involves work on real life simulators to insure an understanding of process operations. Includes unit operations, industrial chemical operations, and a variety of equipment used in industrial processes. Prerequisite: APT 108 with a grade of "C" or greater or Permission of Instructor. Lecture: 2 credits (30 contact hours). Laboratory: 2 credits (120 contact hours/60:1 ratio).
Components: Laboratory, Lecture
Attributes: Technical

APT 146(2) **Course ID: 004543**
Process Applications
Develops an understanding of how to control and operate processes. Involves work on real life simulators to insure an understanding of process operations. Includes a study of interactive control strategies in unit operations, industrial chemical operations, and compressor operations and applications. Prerequisite: APT 108 with a grade of "C" or greater or Permission of Instructor. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

APT 148(2) **Course ID: 004544**
Process Operation Safety
Develops an understanding of how to safely start-up, shutdown, control and operate industrial processes. Includes safe operating tactics and strategies, and procedures as they apply to unit operations and industrial chemical operations. Prerequisite: APT 108 with a grade of "C" or greater or Permission of Instructor. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

APT 154(6) **Course ID: 005336**
Power Plant Practice
Develops an understanding of power plant basics, systems, and equipment and how they are utilized to safely start-up, shutdown, control, and operate a power generation unit. Includes safe operating tactics, strategies, and procedures as they apply to normal and abnormal unit operations. Applies various safety and protection equipment and procedures to unit operations. Prerequisite: APT 108 with a grade of "C" or greater. Lecture: 4 credits (60 contact hours). Laboratory: 2 credits (120 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

APT 156(2) **Course ID: 005337**
Power Plant Protection
Develops an understanding of how to safely start-up, shutdown, control and operate a power generation unit. Includes safe operating tactics, strategies, and procedures as they apply to unit operations and various safety and protection equipment incorporated into unit operations. Prerequisite: APT 108 with a grade of "C" or greater. Lecture: 1 credit (15 contact hours). Laboratory: 1 credit (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

APT 158(3) **Course ID: 005510**
Lineman Technology I
Trains the student in the use of and/or assembly of materials, tools, and equipment common to the electric utility industry. Provides an overview of the energy delivery system, personal responsibility in regard to safety and job requirements, qualifies the student to climb poles, and trains the student to perform tasks typically required of entry-level apprentices. Prerequisite: APT 108 or Consent of Instructor. Corequisite: APT 159, EET 150, EET 151. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

APT 159(4) **Course ID: 005511**
Lineman Technology I Lab
Provides hands on experience in the use of and/or assembly of materials, tools, and equipment common to the electric utility industry. Provides an opportunity for the student to climb poles and perform tasks typically required of entry-level apprentices. Prerequisite: APT 108 or Consent of Instructor. Corequisite: APT 158, EET 150, EET 151. Laboratory: 4 credits (240 contact hours).
Components: Laboratory
Attributes: Technical

APT 202(3) **Course ID: 004545**
Federally Mandated Training
Presents a fundamental knowledge of OSHA, EPA and DOT regulations as concerned with hazardous waste generators and the fundamental knowledge necessary for process operations to qualify for hazardous response to incidents. Covers the required skills to qualify them for HAZWOPER Operations level response. Includes, but are not limited to: HAZCOM, HAZWOPER Operations level, personal protective equipment, working at elevated heights, respirators, SCBAs, and specific hazardous materials. Prerequisite: Consent of Instructor. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

APT 204(1) **Course ID: 004546**
Safety Skills Training
Presents a fundamental knowledge of OSHA, EPA and DOT regulations as concerned with hazardous waste generators. This fundamental knowledge is necessary for process operations to qualify for hazardous response to incidents. The student will be trained in the required skills to qualify them for HAZWOPER Operations level response. The course studies include, but are not limited to: Hazcom, Hazwoper Operations level, personal protective equipment, working at elevated heights, respirators, SCBAs, and specific hazardous materials. (This course will be presented in a semester format.) Prerequisite: APT 148 with a grade of "C" or greater. Corequisite: APT 202. Laboratory: 1 credit (60 contact hours/60:1 ratio).
Components: Laboratory
Attributes: Technical

APT 251(2) **Course ID: 001036**
Application of Process Operations
Prepares the student to demonstrate a working knowledge of the application of the various components involved in process operations. Prerequisite: Instructor Consent. Lecture/Lab: 2.0 credits (75 contact hours).
Components: Lecture
Attributes: Technical

APT 258(3) **Course ID: 005512**
Lineman Technology II
Expands training in the use of and/or assembly of materials, tools, and operation of equipment common to the electric utility industry. Provides pole top rescue techniques, Kilo-Watt Hour (KWH) meter reading, installation of overhead service, voltage testing, operation of bucket truck, splicing and other knowledge and skills typically required of intermediate-level apprentices. Prerequisite: APT 158, APT 159, EET 150, EET 151. Corequisite: APT 259. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

APT 259(4) **Course ID: 005513**
Lineman Technology II Lab
Provides hands on experience in the use of and/or assembly of intermediate materials, tools, and equipment common to the electric utility industry. Provides an opportunity for the student to load/unload and set poles, operate bucket truck and other hydraulic equipment, and perform tasks typically required of intermediate-level apprentices. Prerequisite: APT 158, APT 159, EET 150, EET 151. Corequisite: APT 258. Laboratory: 4 credits (240 contact hours).
Components: Laboratory
Attributes: Technical

APT 291(2 - 3) **Course ID: 001037**
Instructor Consent Required
Special Problems in Applied Process Technologies
Provides additional experience in identified areas of student's need. The subject area and/or tasks must be approved by an assigned instructor. Must also have a component where the student is evaluated by an industry professional. Prerequisite: Consent of Instructor. Discussion: 2.0 - 3.0 credits (45-135 contact hours).
Components: Discussion
Attributes: Technical

APT 299(1 - 6) **Course ID: 001039**
Instructor Consent Required
Cooperative Education Program
For students approaching the major career transition from college to work as a co-op student. Provides supervised on-the-job work experience related to the student's educational objectives. Students participating in the Co-op Education program receive compensation for their work. Prerequisite: Consent of Instructor. Co-Op: 1-6 credits (75-450 contact hours).
Components: Co-Op
Attributes: Technical

ARI Academic Related Instruction

ARI 10(3) **Course ID: 003861**
Developmental Writing
This course is designed to assist students who have demonstrated specific needs in the area of writing. Students are provided individualized or small group instruction. This course includes, but is not limited to, reviewing punctuation skills, reviewing grammar skills, and/or writing short paragraphs. This course may be repeated one time. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: Remedial - English

ARI 30(3) **Course ID: 003845**
Remedial Math
This course is designed to assist students who have demonstrated specific needs in the area of math. Students are provided individualized or small group instruction. This course includes, but is not limited to, basic mathematics skills and introductory algebraic skills. This course may be repeated one time. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

ART Art

ART 100(3) **Course ID: 000049**
Introduction to Art
Provides a basic overview of the study, language, history and cultural relevance of visual art and is designed primarily for non-art majors. Utilizes visually-enhanced lectures and may include optional introductory studio experiences. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, Course Also Offered in Modules

ART 104(3) **Course ID: 004346**
Introduction to African Art
Examines the arts of Africa, including sculpture, painting, pottery, textiles, architecture, altar arts, human adornment and performance art, on the basis of style, iconography, and function, and in relation to religious, political, market and daily contexts. Explores the ways in which Africa has been conceived and deconstructs the assumptions shaping each approach. Addresses the processes (and problems) of collecting and displaying African art throughout the course. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

ART 105(3) **Course ID: 000035**
Ancient Through Medieval Art History
Surveys the historical development of art and architecture with primary emphasis on cultures of Egypt, Western Asia, Greece, Rome and Medieval Europe. Pre-requisite: English and Reading assessment exam scores above the developmental placement level or the successful completion of prescribed developmental course(s). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ART 106(3) **Course ID: 000036**
Renaissance Through Modern Art History
Surveys the historical development of Western art and architecture from the 14th Century through the present. Pre-requisite: English and Reading assessment exam scores above the developmental placement level or the successful completion of prescribed developmental course(s). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ART 108(3) **Course ID: 007380**
Introduction to World Art
Provides a basic overview of the study, language, history, and relevance of the visual art from world cultures and designed primarily for non-art majors. Utilizes visually-enhanced lectures and may include optional introductory visual experiences. Pre-requisite: RDG 185, ENC 091. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

ART 110(3) **Course ID: 004110**
Drawing I
Introduction to basic drawing skills and concepts. Projects in line, value, space and composition are among the topics that will be explored in a variety of media. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 112(3) **Course ID: 004111**
2-Dimensional Design
Investigates design principles of balance, unity and variety, emphasis, and rhythm, and their application to the elements of art, including line, shape, value and color. Uses a variety of media. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 113(3) **Course ID: 004112**
3-Dimensional Design
Investigates three-dimensional form and spatial design, including line, plane, mass, surface and structure. Includes the study of various materials, tools, and sculptural techniques. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 121(3) **Course ID: 004015**
School Art
Introduction to art and to the teaching of art in the lower (1-3) elementary grades.
Components: Laboratory, Lecture

ART 201(3) **Course ID: 000621**
Ancient Art History
Examines the art and architecture of the ancient Mediterranean, focusing on one or more of the cultures of Greece, Rome, Egypt, and the Near East. Pre-requisite: (English and Reading assessment exam scores above the developmental placement level or the successful completion of prescribed developmental course (s)) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ART 202(3) **Course ID: 000457**
Medieval Art History
Examines the architecture, sculpture, painting, and related arts from the rise of Christianity to the beginnings of the Renaissance. Pre-requisite: (English and Reading assessment exam scores above the developmental placement level or the successful completion of prescribed developmental course (s)) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ART 203(3) **Course ID: 000186**
Renaissance Art History
Examines the art in Europe from the 14th to 18th centuries, with emphasis on the major styles, artists, and developments from the early Renaissance through the age of the Baroque. Pre-requisite: (English and Reading assessment exam scores above the developmental placement level or the successful completion of prescribed developmental course (s)) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ART 204(3) **Course ID: 000086**
Modern Art History
Examines the visual arts from the 18th through the 20th centuries, with primary emphasis on Europe and the United States. Pre-requisite: (English and Reading assessment exam scores above the developmental placement level or the successful completion of prescribed developmental course (s)) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ART 205(3) **Course ID: 015848**
African American Art
Provides an introduction to African American Art. Examines the creation of the painting, sculpture, graphic arts, photography, and performance art from the early settlements of the United States to the present. Pre-requisite: Current placement scores for college level-reading established by KCTCS, or completion of RDG 030 or RDG185, and ENC 091. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

ART 208(3) **Course ID: 000017**
Introduction to Art Education
Investigates the theoretical, historical, psychological, and sociological foundations of art education in a lecture-lab format. Provides a critical examination of individual and group activities currently offered in the elementary school art program and includes lectures, curriculum design, evaluation of processes and techniques. Exploration and analysis of design, media and concepts, with special attention to classroom application. ART 208 satisfies the state art requirement for general elementary teacher requirement certification (4 hours of field work required). Lecture: 1 hour; Laboratory: 2 hours.
Components: Laboratory, Lecture
Attributes: Other

ART 210(3) **Course ID: 004114**
Drawing II
Advanced studio investigation of drawing techniques and concepts. Projects in line, value, composition and space will be investigated through individual development of style and expression, with extensive use of figure models. Prerequisite: ART 110. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 211(3) **Course ID: 004113**
Life Drawing
Introduces basic life drawing skills and concepts. Explores topics such as projects in line, value, space, and composition in a variety of media with the human form as the subject matter. Includes drawings in class from a nude human model. Pre-requisite: ART 110. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 220(3) **Course ID: 004115**
Painting I
Studio investigation of the technical and formal concerns of painting, including an understanding of color theory, materials, paint application, and image making. Prerequisite: ART 110 or Consent of Instructor. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 221(3) **Course ID: 004116**
Painting II
Includes advanced studio investigation of the technical and formal concerns of painting. Continues the development of individual style and expression. Prerequisite: ART 220. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 231(3) **Course ID: 007075**
Jewelry/Metals I
Introduces the aesthetic and technical issues relating to basic metalsmithing techniques such as sawing, filing, piercing, forging, forming, soldering, and finishing. Employs demonstrations and hands-on work to present the concepts of metal manipulation. Emphasizes instructor-led critiques. Provides an introduction to historical and contemporary metal work. Lecture/Lab: 3.0 credit (90 contact hours).
Components: Lecture

ART 232(3) **Course ID: 007076**
Jewelry/Metals II
Continues the development of techniques introduced in Jewelry/Metals I. Emphasizes problem-solving skills and the development of personal creativity. Stresses the aesthetic and technical issues relating to raising, enameling, forging, casting, and more advanced sculptural processes. Includes discussion and critique as integral parts of the coursework. Pre-requisite: ART 231 or Consent of Instructor. Lecture/Lab: 3.0 credit hours (90 contact hours).
Components: Lecture

ART 240(3) **Course ID: 004117**
Ceramics I
Introduces a variety of forming and finishing techniques used in working with clay and glaze. Hand building, wheel throwing, surface alteration and glazing will be investigated, along with a brief overview of ceramic history, aesthetics and studio safety. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 241(3) **Course ID: 004118**
Ceramics II
Continues studio investigation of ceramic techniques in hand-building and/or wheel throwing, glazing, surface decoration, glazing and firing. Continued development of individual style and personal expression. Prerequisite: ART 240. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 251(3) **Course ID: 016141**
Graphic Communication I
Provides an introduction to graphic design principles and methods and techniques used to incorporate type and image. Applies the elements and principles of design and basic color theories for design concepts. Pre-requisite or Co-requisite: ART 110 & ART 112, OR consent of instructor. Lecture/Lab: 3.0 credits (90 contact hours)
Components: Lecture
Attributes: Other

ART 252(3) **Course ID: 016142**
Typography
Introduces core principles of typography through a series of progressively complex studio assignments supported by readings, lectures, and software tutorials. Pre-requisite: ART 250 OR consent of instructor. Lecture/Lab: 3.0 credit hours (90 contact hours).
Components: Lecture
Attributes: Other

ART 253(3) **Course ID: 016143**
Graphic Communication II
Expands proficiency in all aspects of the design process by continuing the development of graphic design principles, methods, and techniques introduced in Graphic Communication I. Incorporates industry-standard page layout, illustration, and image editing software. Includes discussion and critique as integral parts of the coursework. Pre-requisite: ART 251 OR consent of instructor. Lab/ Lecture: 3.0 credit hours (90 contact hours).
Components: Lecture
Attributes: Other

ART 254(3) **Course ID: 016144**
Design Process and Presentation
Continues investigation of design principles, process, vocabulary, methods, and presentation. Transitions from theoretical to applied problems with a focus on portfolio preparation and professionalism in communication. Pre-requisite: ART 251 OR consent of instructor. Lecture/Lab: 3.0 credits (90 contact hours)
Components: Lecture
Attributes: Other

ART 260(3) **Course ID: 004119**
Sculpture I
Studio investigation of the technical and formal concerns of three-dimensional expression. Basic sculptural methods of modeling, casting, carving and assembling will be explored in a variety of media. Prerequisite: ART 110, ART130. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 261(3) **Course ID: 006207**
Sculpture II
Continues the development of sculptural techniques started in Sculpture I. Exploration of subject matter and personal creativity will be emphasized. Students will develop and utilize problem solving skills. Prerequisite: ART 260 or consent of instructor. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 270(3) **Course ID: 006208**
Printmaking I
Introduces the possibilities and potential of the printmaking media for generating fine arts ideas and images. Explores traditional and contemporary printmaking processes of monotype and monoprint, relief, lithography, intaglio, and stencil. Covers black and white and multiple color printing methods. Introduces printmaking vocabulary and aesthetics. Prerequisite: (ART 110 and ART 120) or consent of instructor. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 271(3) **Course ID: 006209**
Printmaking II
Explores concepts and techniques in intaglio, lithography, screen-print and/or relief printing with an introduction to contemporary computer/digital aided printmaking processes. Stresses individual expression by creating original imagery while continuing to learn about printmaking as a process. Emphasizes two-dimensional design and color theory concepts and drawing skills. Prerequisite: ART 270 or permission of instructor. Lecture/ Lab: 3 credits (90 contact hours).
Components: Lecture

ART 280(3) **Course ID: 006210**
Beginning Film Photography
Introduces black and white film photographic processes including the use of a camera and the darkroom. Stresses technical and compositional aspects of photography as an art medium. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 281(3) **Course ID: 006211**
Digital Photography I
Introduction to the skills, techniques and applications needed to create and manipulate digital photographs and to develop an understanding of photography as a fine art medium. Instruction will include the use of the digital camera and its controls to compose and capture photographs, scanning, printing and using Adobe Photoshop as a "digital darkroom". Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 282(3) **Course ID: 006212**
Digital Photography II
Emphasizes the creation of fine art photographs that reflect the intent and vision of the photographer. Stresses the technical and aesthetic issues relating to image capture, manipulation, printing and presentation. Explores visual and conceptual skills, professional workflow and photographic history. Prerequisite: ART 281 or permission of instructor. Lecture/Lab: 3 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 290(3) **Course ID: 006213**
Survival Skills for Artists
Introduces skills needed to attain a higher level of education and/or a career in the visual arts. Explores the wording and formatting of credentials and statements. Covers the critical language of art, digital and printed portfolios, exhibiting artwork, marketing, career opportunities, the hazards of art materials and setting up an art studio. Prerequisite: 9 credits of ART 100 / 200 level classes or permission of instructor. Lecture: 2 credits (30 contact hours), Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture

ART 299(1 - 3) **Course ID: 006214**
Instructor Consent Required
Directed Studies in Art: (Topic)
Provides an opportunity to cover topics outside the normal range of studio classes or further investigation of topics and techniques covered in studio classes. Prerequisite: Consent of instructor. Laboratory: 1-3 credits (30-90 contact hours).
Components: Laboratory
Attributes: Other

ART 1001(1) **Course ID: 007381**
Art Theory and Design
Provides a basic overview of art theory, philosophy, elements, and principles of design. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

ART 1002(1) **Course ID: 007382**
Art Media and Critique
Introduces students to different forms of art, the media to create art, and the analysis and critique of art using terminology and vocabulary specific to the visual arts. Pre-requisite: ART 1001. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

ART 1003(1) **Course ID: 007383**
Introduction to Art History
Introduces students to the developments in art from the prehistoric through contemporary eras. Pre-requisite: 1001. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

ASC Animal Sciences

ASC 106(3) **Course ID: 000056**
Agricultural Animal Science
Relationships of food production and consumption to income of humans throughout the world; major livestock (beef and dairy cattle, sheep, swine, poultry, and horses) production areas of the world; relationships between live animal merit and yield of retail cuts of meat; identification of skeletal components; identification and functions of reproductive and digestive tract components; characteristics of breeds of beef and dairy cattle, sheep, swine, poultry and horses. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: Other

ASL American Sign Language

ASL 101(3) **Course ID: 005753**
American Sign Language I
A functional-notional approach to learning beginning American Sign Language (ASL). Development of basic knowledge of and understanding of conversational ASL and cultural features of the language and community. Lecture: 3 credits (45 contact hours). Laboratory: 0 credits (15 contact hours).
Components: Laboratory, Lecture
Attributes: University Course (Eastern Kentucky University)

ASL 102(3) **Course ID: 005754**
American Sign Language II
Continued development of basic knowledge of and understanding of conversational ASL and cultural features of the language and community. Prerequisite: ASL 101 with a minimum grade of "C" or permission of instructor. Lecture: 3 credits (45 contact hours). Laboratory: 0 credit (15 contact hours).
Components: Laboratory, Lecture
Attributes: University Course (Eastern Kentucky University)

ASL 201(3) **Course ID: 005755**
American Sign Language III
Development of intermediate expressive and receptive ASL skills and cultural features of the language and community. Prerequisite: ASL 102 with a minimum grade of "C" or permission of instructor.
Components: Laboratory, Lecture
Attributes: University Course (Eastern Kentucky University)

ASL 202(3) **Course ID: 005756**
American Sign Language IV
Continued development of intermediate expressive and receptive ASL skills and cultural features of the language and community. Prerequisite: ASL 201 with a minimum grade of "C" or permission of instructor. Lecture: 3 credits (45 contact hours). Laboratory: 0 credits (15 contact hours).
Components: Laboratory, Lecture
Attributes: University Course (Eastern Kentucky University)

AST Astronomy

AST 101(3) **Course ID: 000058**
Frontiers of Astronomy
Covers the life histories of stars, the nature of black holes and quasars, the origin of the universe, planets of the solar system, and the possibilities for extraterrestrial life. Includes observation-based activities. A one-semester introductory course for non-science majors. Credit is not given to students who have received credit for AST 191 or AST 192. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

AST 155(3) **Course ID: 006341**
Astrobiology
Examines topics related to the origins of planets, the requirements for life, the search for life away from Earth, the societal implications of discovering other forms of life, and the future of life on Earth and in space from a multidisciplinary perspective. Credit not available for both BIO 155 and AST 155. Prerequisite: MT065 and ENC091or equivalent as determined by KCTCS placement examination. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: BIO 155
Attributes: SN - Science

AST 191(3) **Course ID: 000060**
The Solar System
Emphasizes the nature, origin, and evolution of planets, satellites, and other objects in the Solar System. Includes historical astronomy, the naked eye phenomena of the sky, and modern solar system discoveries made by spacecraft. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

AST 192(3) **Course ID: 000062**
Stars, Galaxies and the Universe
Emphasizes the Sun and the universe outside the Solar System. Has a principal theme of the origin and evolution of stars, galaxies and the universe at large. Includes topics of black holes, quasars, and the big bang model of the universe. Prerequisite: (MT120 or MT122) or a minimum ACT math score of 18. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

AST 195(1) **Course ID: 000065**
Introductory Astronomy Laboratory
Involves performance of exercises in both planetary and stellar astronomy, including Kepler's Laws of Planetary Motion and Newton's Laws of Motion. Examines the functions and limitations of different types of telescopes and mounts. Includes observation of the sun, moon, planets, binaries, galaxies, and nebulae. Prerequisite or corequisite: AST101 or AST191 or AST192; MT 120 or two years of high school algebra; or consent of the instructor.
Components: Laboratory
Attributes: SL - Science Laboratory

ATE Aviation/Airway Management

ATE 100(1) **Course ID: 007113**
Aviation Math
Covers mathematics related to the aerodynamic and physical forces acting on an aircraft in flight. Pre-requisite: Computer Literacy or Consent of Instructor. Lecture/Lab: 1.0 credit (40.5 contact hours).
Components: Lecture
Attributes: Technical

ATE 102(3) **Course ID: 007114**
Introduction to Aircraft Maintenance I
Teaches knowledge and skills necessary in measuring, calculating, and documenting aircraft weight and balance. Provides instruction in the identification, cause, prevention, removal and treatment of corrosion. Includes interior and exterior cleaning of the aircraft. Pre-requisite: Computer Literacy or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture
Attributes: Technical

ATE 104(3) **Course ID: 007115**
Introduction to Aircraft Maintenance II
Provides instruction on the aerodynamic and physical forces acting on an aircraft in flight, basic electricity theory, concepts, components, physics, meter operation and use, battery construction and servicing, and basic principles of physics as related to aviation maintenance. Pre-requisite: Computer Literacy or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture
Attributes: Technical

ATE 106(3) **Course ID: 007116**
Introduction to Aircraft Maintenance III
Provides instruction in reading and interpretation of basic industrial and aircraft blue prints, basic handling and ground service techniques of the aircraft, the use of maintenance publications, aircraft mechanic privileges and limitations, and the use and completion of required forms and records. Pre-requisite: Computer Literacy or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture
Attributes: Technical

ATE 108(3) **Course ID: 007117**
Introduction to Aircraft Maintenance IV
Provides an understanding of basic hydraulic functions, the fabrication of tubing and flex hoses as well as seal comparability. Includes instruction in structural inspection, materials and fasteners, and repair methods. Pre-requisite: Computer Literacy or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture
Attributes: Technical

ATE 202(3) **Course ID: 007118**
Aircraft Structures I
Covers the principles of sheet metal layout, bending, and rivet installation. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of "C" or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture
Attributes: Technical

ATE 204(3) **Course ID: 007119**
Aircraft Structures II
Provides instruction in the inspection, service and repair of welded aircraft assemblies and structures, metal and composite aircraft structures, including laminated and honeycomb structures, plastic materials, interior furnishings and access openings. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of "C" or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours)
Components: Lecture
Attributes: Technical

ATE 206(3) **Course ID: 007120**
Aircraft Structures III
Includes inspection of airframes to determine airworthiness. Covers the methods and techniques used in the assembly of subunits and major components of the airframe; and the rigging of primary, secondary and auxiliary control surfaces. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of "C" or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture
Attributes: Technical

ATE 208(3) **Course ID: 007121**
Aircraft Structures IV
Provides instruction in the repair of wood structures, the inspection, testing, repair, selection, and installation of aircraft fabric covering; and the identification, application and inspection of aircraft finishing materials. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of "C" or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture
Attributes: Technical

ATE 222(3) **Course ID: 007122**
Aircraft Systems I
Covers the repair of hydraulic and pneumatic power systems components. Includes the inspection, check, service, and repair of landing gear, retraction systems, shock struts, brakes, wheels, tires, and steering system. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of "C" or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture
Attributes: Technical

ATE 224(3) **Course ID: 007123**
Aircraft Systems II
Covers checking, inspecting, troubleshooting and repair of aircraft electrical system and system components. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of "C" or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture
Attributes: Technical

ATE 226(3) **Course ID: 007124**
Aircraft Systems III
Covers checking, inspection, servicing, repair and troubleshooting of fuel systems and components, heating, cooling, air conditioning, pressurization, and oxygen systems; and rain and ice control and removal systems. Includes types of fuels used in various aircraft and a discussion of the problems associated with fueling and various techniques in fueling. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of "C" or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture
Attributes: Technical

ATE 228(3) **Course ID: 007125**
Aircraft Systems IV
Includes discussion, inspection, and troubleshooting of navigational and communication systems, fire detection and extinguishing systems. Covers the inspection, troubleshooting, and repair of heading, speed, altitude, time, attitude, temperature, pressure and position indicating systems and installation of instruments. Provides for the inspection, checking and servicing of speed and take-off warning systems, electrical brake controls, antiskid systems, and autopilot systems; and the pitot-static system, floating compass system and the gyros used for flight instruments. Includes the role of mechanics when working with precision instruments. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of "C" or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture
Attributes: Technical

ATE 242(3) **Course ID: 007126**
Aircraft Powerplants I
Covers theory and development of the aircraft internal combustion engine as well as instruction in the use of engine construction and repair. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of "C" or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture
Attributes: Technical

ATE 244(3) **Course ID: 007127**
Aircraft Powerplants II
Covers inspection, checking, servicing and the repair of opposed and radial engines and reciprocating engine installation. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of "C" or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture
Attributes: Technical

ATE 246(3) **Course ID: 007128**
Aircraft Powerplants III
Includes construction, repair and overhaul of turbine engines. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of "C" or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture
Attributes: Technical

ATE 248(3) **Course ID: 007129**
Aircraft Powerplants IV
Includes construction, repair and overhaul of turbine engines. Covers the operation and inspection of turbine engines. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of "C" or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture
Attributes: Technical

ATE 252(3) **Course ID: 007130**
Aircraft Powerplant Systems I
Includes the purpose, use, and selection of lubricants; repair of engine lubrication system components; and the inspection, checking, servicing, troubleshooting and repairing of engine lubrication systems, propeller synchronizing and ice control systems, fixed-pitch, constant-speed, and feathering propellers, and propeller governing systems. Provides for the identification and selection of propeller lubricants, balance propellers, and repair of propeller control system components. Covers the installation, troubleshooting and the removal of propellers. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of "C" or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture
Attributes: Technical

ATE 254(3) **Course ID: 007131**
Aircraft Powerplant Systems II
Covers troubleshooting, servicing and repair of fluid rate of flow indicating systems and repair of engine temperature, pressure, and rpm indicating systems. Includes the operation and overhaul of magneto and ignition harness; repair of engine ignition system components; and the inspection, check, service, troubleshooting, and repair of reciprocating and turbine engine ignition systems. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of "C" or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture
Attributes: Technical

ATE 256(3) **Course ID: 007132**
Aircraft Powerplant Systems III
Includes the inspection, checking, troubleshooting, servicing and repair of engine ice and rain control systems, heat exchangers, superchargers, carburetor air intake and induction manifolds. Covers the repair of engine electrical system components, and the installing, checking, and servicing of engine electrical wiring, controls, switches, indicators, and protective devices. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of "C" or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture
Attributes: Technical

ATE 258(3) **Course ID: 007133**
Aircraft Powerplant Systems IV
Covers the operation, inspection and repair of fuel systems and components of aircraft fuel systems and fuel metering systems. Includes the inspection and repair of engine cooling system components, engine exhaust system components, and engine fire detection and extinguishing systems. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of "C" or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture
Attributes: Technical

ATE 292(3) **Course ID: 006783**
Introduction To Aviation Electronics
Provides instruction in basic to intermediate electronics and specifically how they relate to aviation maintenance technology. Lecture: 3.0 credit hours (45 contact hours).
Components: Lecture
Attributes: Pilot Course, Technical

ATE 293(3) **Course ID: 006784**
GROL+Radar Exam Prep
Provides instruction and preparation for the FCC General Radio Operators License and Radar endorsement exams. Lecture: 3.0 credit hours (45 contact hours).
Components: Lecture
Attributes: Pilot Course, Technical

ATE 299(1 - 6) **Course ID: 004550**
Instructor Consent Required
Selected Topics in Aviation Maintenance Technology: (Topic)
Various aviation maintenance topics, issues and trends will be addressed. Topics may vary from semester to semester at the discretion of the instructors; course may be repeated with different topics to a maximum of six credit hours. Lecture: varies. Laboratory: varies. Prerequisite: Consent of Instructor.
Components: Laboratory, Lecture
Attributes: Technical

AUT Automotive Technology

AUT 110(3) **Course ID: 001050**
Brake Systems
Involves the operational theory and application of hydraulic and anti-lock brake systems; discusses disc and drum brakes. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

AUT 111(2) **Course ID: 001051**
Brake Systems Lab
Develop skills in the diagnosis and repair of hydraulic and anti-lock brake systems, covering both disc and drum type braking systems. The student may be provided a work experience alternating between periods of work off campus and work in a classroom laboratory setting. Prerequisite or co-requisite: AUT 110. Lab: 2.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

AUT 130(3) **Course ID: 001052**
Manual Drive Train and Axles
Involves an in-depth study of principles of operation, construction, and service of manual transmissions and related drive train components (differentials, clutches, u-joints, rear wheel drive and 4-wheel drive). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

AUT 131(2) **Course ID: 001053**
Manual Drive Train and Axles Lab
Develop skills in the diagnosis and repair of manual transmissions and related drive train components (differentials, clutches, u-joints, rear wheel drive, and 4-wheel drive). The student may be provided a work experience alternating between periods of work off campus and work in a classroom laboratory setting. Prerequisite or co-requisite: AUT 130. Lab: 2.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

AUT 140(3) **Course ID: 001054**
Basic Fuel and Ignition Systems
Includes the theory, component identification, application, operation, service and repair of the basic automotive ignition, fuel, and emission systems, including related components. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

AUT 141(2) **Course ID: 001055**
Basic Fuel and Ignition Systems Lab
Provides skills necessary to diagnose and repair the automotive basic ignition, fuel, and emission systems and related components are developed. The student may be provided a unique work experience alternating between periods of work on-site and work in a classroom laboratory setting. Prerequisite or Co-requisite: AUT 140. Lab: 2.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

AUT 142(3) **Course ID: 001056**
Emission Systems
Presents the theory, component identification, application, operation, service and repair of advanced automotive ignition, fuel, and emission systems, including related components. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

AUT 143(2) **Course ID: 001057**
Emission Systems Lab
Introduces skills necessary to diagnose, service and repair automotive advanced ignition, fuel, and emission systems, including related components are developed. The student may be provided a work-study experience alternating between periods of work off campus and work in a classroom laboratory setting. Prerequisite or Co-requisite: AUT 142. Lab: 2.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

AUT 160(3) **Course ID: 001058**
Suspension and Steering
Presents the automotive suspension system, the diagnosing of suspension problems, identifying components, recognizing tire wear problems, wheel balancing and the use of alignment. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

AUT 161(2) **Course ID: 001059**
Suspension and Steering Lab
Introduces skills necessary in the diagnosis and repair of automotive suspension systems, wheel alignment, and wheel balancing. The student may be provided a work experience alternating between periods of work off campus and work in a classroom laboratory setting. Prerequisite or Co-requisite: AUT 160. Lab: 2.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

AUT 180(3) **Course ID: 001060**
Automatic Transmission/Transaxle
Involves the study of the operating principles of rear and front wheel drive automatic transmissions and transaxles and the testing and diagnostic process. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

AUT 181(2) **Course ID: 001061**
Automatic Transmission/Transaxle Lab
Develop diagnostic and repair skills related to the operation of rear and front wheel automatic transmissions and transaxles. The student may be provided a work experience alternating between periods of work off campus and work in a classroom laboratory setting. Prerequisite or Co-requisite: AUT 180. Lab: 2.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

AUT 198(1) **Course ID: 001062**
Instructor Consent Required
Practicum
The Practicum provides supervised on-the-job work experience related to the student's educational objectives. Students who participate in the practicum do not receive compensation. Prerequisite: Permission of the Instructor
Components: Practicum
Attributes: Technical

AUT 199(1) **Course ID: 001063**
Instructor Consent Required
Cooperative Education Program
Co-op provides supervised on-the-job work experience related to the student's educational objectives. Students who participate in the Cooperative Education program receive compensation for their work. Prerequisite: Permission of the Instructor
Components: Co-Op
Attributes: Technical

AUT 240(3) **Course ID: 001064**
Computer Control Systems and Diagnosis
Presents the comprehensive diagnostics of on-board computer control systems, including distributorless ignition systems. Presents the problem solving process including flowchart reading. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

AUT 241(2) **Course ID: 001065**
Computer Control Systems and Diagnosis Lab
Introduces the skills necessary to diagnose and repair drivability problems associated with on-board computer control systems. The student may be provided a work experience alternating between periods of work off campus and work in a classroom laboratory setting. Prerequisite or Co-requisite: AUT 240. Lab: 2.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

AUT 275(3) **Course ID: 006889**
Hybrid and Electric Vehicle Technology
Focuses on the theories, principles, and diagnosis relating to hybrid automobiles. Pre-requisite:ADX 120 and ADX 121 and ADX 260 and ADX 261. Co-requisite: AUT 276. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

AUT 276(2) **Course ID: 006890**
Hybrid and Electric Vehicle Technology Lab
Focuses on the theories, principles, and diagnosis relating to hybrid automobiles. The student may be provided a work-study experience alternating between periods of work off campus and work in a classroom laboratory setting. Pre-requisite: ADX 120 and ADX 121 and ADX 260 and ADX 261. Co-requisite: AUT 275. Lab: 2.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

AUT 290(1) **Course ID: 001066**
Instructor Consent Required
Special Problems I
A course designed for the student who has demonstrated specific needs for additional training. The student may be provided a work/study experience alternating between periods of work off campus and work in a classroom laboratory setting. Prerequisite: Permission of Instructor.
Components: Laboratory
Attributes: Technical

AUT 291(2) **Course ID: 001067**
Instructor Consent Required
Special Problems II
A course designed for the student who has demonstrated specific needs for additional training. The student may be provided a work/study experience alternating between periods of work off campus and work in a classroom laboratory setting. Prerequisite: Permission of Instructor.
Components: Laboratory
Attributes: Technical

AUT 292(3) **Course ID: 001068**
Instructor Consent Required
Special Problems III
A course designed for the student who has demonstrated specific needs for additional training. The student may be provided a work/study experience alternating between periods of work off campus and work in a classroom laboratory setting. Prerequisite: Permission of Instructor.
Components: Laboratory
Attributes: Technical

AUT 298(1) **Course ID: 001069**
Instructor Consent Required
Practicum
The practicum provides supervised on-the-job work experience related to the students educational objectives. Students who participate in the practicum do not receive compensation. Prerequisite: Permission of the Instructor
Components: Practicum
Attributes: Technical

AUT 299(1) **Course ID: 001070**
Instructor Consent Required
Cooperative Education Program
Co-op provides supervised on-the-job work experience related to the students educational objectives. Students who participate in the Cooperative Education program receive compensation for their work. Prerequisite: Permission of the Instructor
Components: Co-Op
Attributes: Technical

AVN Aviation

AVN 111(3) **Course ID: 016447**
Ground School Rotary Wing
Provides aeronautical knowledge necessary to prepare student pilots to successfully complete Federal Aviation Administration (FAA) Private Pilot written examination. Course completion standards require that the student successfully complete the Private Pilot Helicopter FAA written examination. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

AVN 112(4) **Course ID: 016448**
Private Pilot Helicopter: Flight I
Provides first twenty-five dual and/or solo flight hours leading to FAA private pilot rotary wing certification using FAA approved flight training syllabus (Lab). A review of elementary flight operations including basic aircraft control, elementary radio navigation, air traffic control procedures, cross-country operations, and solo flight. Associated ground instruction includes a review of knowledge areas required for completion of the Private Pilot Certificate with helicopter rating. At the successful completion of this course the student will have gained the aeronautical knowledge and experience necessary to advance to Private Pilot-Rotary: Flight II. Pre-requisite or Co-requisite: AVN 111 with C or better. Lecture/Lab: 4 credits (105 contact hours)
Components: Lecture
Attributes: Technical

BAM Building and Apartment Maintenance

BAM 100(6) **Course ID: 001071**
Introduction to Building & Apartment Maintenance
This course covers required safety practices in the shop and workplace; identification and use of hand tools used in the construction trades; identification of construction materials; interpretation of blueprints and/or drawings; and exposure to various mechanical and structural systems in a residential structure.
Components: Lecture
Attributes: Technical

BAM 110(3) **Course ID: 001072**
Residential Maintenance Carpentry
This course covers the basic aspects of framing, roofing, window, door, and stair maintenance. The student will receive training in the proper use of ladders and in the handling and storage of building materials. Prerequisite: BAM 100
Components: Lecture
Attributes: Technical

BAM 120(3) **Course ID: 001074**
Residential Interior Maintenance
This course covers the basic aspects of drywall hanging, finishing, and repair; painting; window, door, and floor moldings; laying composition and vinyl flooring; and maintaining ceramic tile. Prerequisite: BAM 100
Components: Lecture
Attributes: Technical

BAM 140(3) **Course ID: 001078**
Residential Maintenance Wiring
This course covers the basic aspects of electric theory, wire and cables, fixtures and devices, and troubleshooting and maintenance wiring. Prerequisite: BAM 100
Components: Lecture
Attributes: Technical

BAS Business Administration System

BAS 110(3) **Course ID: 016239**
Worksheets in Business Applications
Focuses on the application of worksheet features to business practices. Provides students with the knowledge and skills necessary to apply worksheet enhanced functions to derive charts, graphs and tables to aid in analyzing business data. Provides students the opportunity to think critically and find solutions to realistic business problems through use of available data analysis tools. Pre-requisite: Computer Literacy or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

BAS 120(3) **Course ID: 000095**
Personal Finance
Provides information needed to make intelligent choices and to take effective action in the management of personal resources. Applies financial planning, buying, borrowing, saving, budgeting, investing, insurance, and taxes to personal finances. Pre-requisite: Completion of or concurrent enrollment in MAT 65 or higher level math or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

BAS 125(3) **Course ID: 016879**
Social Media Marketing: Fundamental Concepts, Skills, and Strategies
Cultivates a basic to intermediate understanding of social media history, terminology, and concepts as they apply to the marketing and business sectors. Integrates a working knowledge of platform management and simple social media marketing strategy. Lecture: 3.0 credits (45 contact hours). Pre-requisite: Placement scores for college level reading or completion of developmental reading courses.
Components: Lecture
Attributes: Technical

BAS 126(3) **Course ID: 016880**
Social Media Marketing: Project Management and Implementation Strategies
Prepares students to create a comprehensive social media marketing campaign, applicable to any business or organization. Learn intermediate social media strategies and best practices for engagement. Introduces the student to social media policy, procedure, and engagement guidelines that will explain how all stakeholders and groups in an organization should monitor and participate in social media interactions. Pre-requisite: BAS 125. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

BAS 155(3) **Course ID: 000100**
Personal Selling
Introduces the professional selling process involving a series of interrelated activities with emphasis on planning and delivery of sales presentations and simulation and role playing of sales techniques. Examines the six selling steps including--prospecting, qualifying, presenting, answering objections, closing, and the after-sale service. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

BAS 160(3) **Course ID: 000101**
Introduction to Business
Introduces business careers, terminology, and the interrelationships of business topics. Presents the complexities of business and the impact on communities and their economies. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

BAS 170(3) **Course ID: 005244**
Entrepreneurship
Presents topics such as product development, finance, and business plan preparation and their impact on entrepreneurship/small business management. Pre-requisite: BAS 160 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

BAS 200(3) **Course ID: 000104**
Small Business Management
Introduces the facets of establishing and operating and/or owning a small business, including legal forms of business organization, finance, accounting, insurance, governmental regulations and assistance, economics, marketing, and management principles. Prerequisite: BAS 160 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Course Equivalents: MGT 200
Attributes: Course Also Offered in Modules, Technical

BAS 212(3) Course ID: 000105
Introduction to Financial Management
Introduces the basic concepts of managing financial resources and techniques of financial analysis used for practical business decisions. Demonstrates use of financial ratios to evaluate the past performance of the firm, financial planning techniques, the effect of leverage on profitability and risk, the time value of money, and contemporary approaches to working capital management and capital budgeting. Computes financial ratios, constructs pro forma financial statements, conducts break-even analysis, and computes present and future values of funds. Prerequisite: MAT 105 or MAT 110 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

BAS 250(1) Course ID: 000106
Business Employability Seminar
Creates an error-free portfolio of business employment documents, using computer technology to assist with composition, proofreading, and formatting. Demonstrate proper interviewing skills through mock interviews. Course is offered on a Pass/Fail basis. Prerequisite: (CIT 105 Introduction to Computers, Sophomore Standing, and Business Administration Program Students only) or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

BAS 256(3) Course ID: 002280
International Business
Identifies the business and managerial processes in a global context. Examines the importance and impact of the economic, cultural, and political environment on business functions. Determines the effect of management functions as they apply across various cultures. Prerequisite: BAS 160 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

BAS 260(2) Course ID: 004432
Professional Development and Protocol
Prepares students approaching the major career transition from college to work either as a graduating student or as a cooperative education student. Focuses on acceptable business protocol and how to project a professional image. Prerequisite: BAS 250 or Consent of Instructor. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

BAS 267(3) Course ID: 000107
Introduction to Business Law
Introduces the state and federal court systems, tort and criminal law, law of contracts, partnership, sale of goods, government regulations, bailment, negotiable instruments, methods of research, and the judicial system (discovery, trial, and appellate processes). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

BAS 274(3) Course ID: 000108
Human Resource Management
Introduces basic methods of recruiting, selecting, training, compensating, and maintaining a productive workforce. Examines concepts of effective employee relations including collective bargaining, contract administration, and safety and health programs. Emphasizes techniques for systematic human resource planning and development of policies consistent with government regulations. Prerequisite: BAS 160 and BAS 283) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

BAS 280(1 - 4) Course ID: 004474
Business Internship
Provides an opportunity for a work experience related to the student's educational objective and concepts learned in courses required for credential. (One hour of credit, up to a maximum of four credit hours, awarded for every 40 hours of approved work experience, not to exceed 160 hours). Prerequisite: Sophomore Standing or Consent of Instructor. Practicum/Internship: 1.0 - 4.0 credits
Components: Practicum
Attributes: Technical

BAS 282(3) Course ID: 000109
Principles of Marketing
Introduces marketing functions as it applies to various types of business organizations with attention to the marketing concept, including the marketing mix of product, price, promotion, and distribution decisions; international marketing; and social responsibility. Prerequisite: BAS 160 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

BAS 283(3) Course ID: 000110
Principles of Management
Examines the functional framework of planning, organizing, leading, and controlling as it is utilized to introduce the management process. Introduces the interdisciplinary nature of management with the inclusion of relevant aspects of human behavior and rational decision making. Prerequisite: BAS 160 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

BAS 284(3) Course ID: 000112
Applied Management Skills
Applies management theories and techniques with emphasis on the action-skills that managers need for success. Examination of various course topics in this capstone course include: delegating, motivating employees, team building, conflict management, coaching, and managing change. Prerequisite: (BAS 160 and BAS 283) or prior supervisory experience. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

BAS 285(3) Course ID: 000113
Problems in Marketing and Management
Demonstrates knowledge of theories and techniques in management and marketing with emphasis on the action-skills that managers need for success. Examines course topics which include: delegating, motivating employees, team building, conflict management, coaching, and managing change. This is a capstone course. Prerequisite: (BAS 282 and BAS 283) or taken concurrently. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

BAS 287(3) Course ID: 000114
Supervisory Management
Examines the roles and responsibilities of the supervisor, emphasizing human relations skills while recognizing the behavioral factors of individuals and groups in the work environment. Applies conceptual knowledge base and skills to identify and develop the supervisor's role and responsibilities. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

BAS 288(3) Course ID: 000115
Personal and Organizational Leadership
Recognizes personal leadership skills that are essential for effective team and organizational guidance while examining organizational leadership theories that promote personal and organizational goal setting, ethical management, time management, human relations, effective communication, and fundamentals of synergy. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

BAS 289(3) Course ID: 005531
Operations Management
Introduces the fundamental concepts, principles, and practices of operations management. Introduces and examines operations management careers, terminology and concepts in both manufacturing and service organizations. Prerequisite: BAS 160 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

BAS 290(3) Course ID: 005579
Management, Ethics and Society
Examines the business leadership-government-society relationship. Includes business leadership, ethics, decision-making, social costs, corporate responsibility, governance, global trends and the role of government in business. Prerequisite: BAS 283 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

BAS 291(3) Course ID: 000116
Retail Management
Examines retail structure, merchandising, promotions, store control, and decision. Identifies fundamental principles of store organization, consumer behavior, and customer service. Includes retailing trends, opportunities, and problems. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

BAS 293(3) Course ID: 005249
Principles of Finance
Explains fundamentals of financial concepts and valuation, corporate decisions (with emphasis in financial instruments), the banking system, financial planning, money and interest rates, and capital structure and investments. Prerequisite: BAS 160 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

BAS 294(3) Course ID: 005250
Money and Financial Institutions
Presents financial intermediaries and their markets from an economic standpoint. Emphasizes analysis of financial institutions and their relationship with the money market, capital market, Federal Reserve System, monetary policy, fiscal policy, regulatory environment, international financial influences, and contemporary trends. Prerequisite: BAS 212 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

BAS 295(3) Course ID: 005251
International Finance
Covers international finance and financial institutions, including foreign exchange, collections, credit, international financing agencies, and international financial markets. Places emphasis on role of the central bank, international and monetary trade theory, and the theory of exchange rate determination. Discusses role of the International Monetary Fund and the World Bank in financial globalization. Prerequisite: BAS 212 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

BAS 299(1 - 3) Course ID: 000119
Instructor Consent Required
Selected Topics in Business Management: (Option Topic)
Interprets technological developments, new business issues, and/or business topics as they relate to the student's chosen field. Prerequisite: Consent of Instructor. Lecture: 1.0 - 3.0 credits (15-45 contact hours).
Components: Lecture
Attributes: Technical

BAS 1201(0.8) Course ID: 005810
The Financial Planning Process
Introduces the student to basic financial planning concepts. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

BAS 1202(0.7) Course ID: 005811
Managing Your Money
Presents basic concepts related to financial institutions, consumer borrowing, and purchasing decisions. Prerequisite: BAS 1201, or consent of instructor. Lecture: 0.7 credits. (10.5 contact hours).
Components: Lecture

BAS 1203(1) **Course ID: 005812**
Managing Investments
Presents the fundamentals of personal investments. Prerequisite: BAS 1202, or consent of instructor. Lecture: 1 credit. (15 contact hours).
Components: Lecture

BAS 1204(0.5) **Course ID: 005813**
Protecting Your Resources
Presents the basic concepts of asset protection using insurance and estate planning. Prerequisite: BAS 1203, or consent of instructor. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

BAS 1601(0.6) **Course ID: 005145**
The Foundations of Business
Analyzes the essential components of business on a national and global scale. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

BAS 1602(0.6) **Course ID: 005146**
Business Ownership, Money, and Quality
Examine business ownership, monetary systems, and quality principles. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

BAS 1603(0.6) **Course ID: 005147**
Introduction to Management
Identifies management functions and proper management techniques. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

BAS 1604(0.6) **Course ID: 005148**
Introduction to Marketing
Examine marketing functions and effective marketing techniques. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

BAS 1605(0.6) **Course ID: 005149**
Business Decision Making Tools
Identify decision making tools and their specific applications to business. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

BAS 1701(0.5) **Course ID: 005245**
Product Development
Examine essential information regarding the product development process for a small business. Prerequisite: BAS 160 or Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

BAS 1702(0.5) **Course ID: 005246**
Entrepreneurial Finance
Identifies current and essential strategies for financing small businesses. Prerequisite: BAS 1701 or Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

BAS 1703(0.5) **Course ID: 005252**
Preparing the Business Plan
Examine current and essential strategies for financing small businesses. Prerequisite: BAS 1702 or Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

BAS 1704(0.5) **Course ID: 005247**
Small Business Taxes
Examines federal, state and local tax requirements for a small business. Prerequisite: BAS 1703 or Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

BAS 1705(0.5) **Course ID: 005248**
The Small Business Law Environment
Examines business and consumer laws for the small business. Prerequisite: BAS 1704 or Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

BAS 1706(0.5) **Course ID: 006221**
Current Small Business Managerial Issues
Presents students with issues facing small businesses with an emphasis on entrepreneurship management. Prerequisite: BAS 1705 or instructor consent.Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

BAS 2001(0.5) **Course ID: 005284**
Small Business Organization
Examines essential information regarding business and consumer laws for the small business. Prerequisite: BAS 160 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

BAS 2002(0.5) **Course ID: 005285**
Essential Small Business Finance
Identifies essential information to finance a small business. Prerequisite: BAS 2001 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

BAS 2003(0.5) **Course ID: 005286**
Essentials of a Small Business Plan
Identifies the essential information to prepare and maintain a small business plan. Prerequisite: BAS 2002 or Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

BAS 2004(0.5) **Course ID: 005287**
Small Business Accounting and Financial Records
Examines essential information regarding accounting and financial records for a small business. Prerequisite: BAS 2003 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

BAS 2005(0.5) **Course ID: 005294**
Small Business Marketing
Examines essential information to market a small business. Prerequisite: BAS 2004 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

BAS 2006(0.5) **Course ID: 005295**
Managing Growth in the Small Business
Identifies information essential to managing growth in a small business. Prerequisite: BAS 2005 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

BAS 2121(1) **Course ID: 006106**
Financial Statement Analysis
Presents financial ratios and pro forma financial statements. Prerequisite: MAT 105 or MAT 110 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

BAS 2122(1) **Course ID: 006107**
Break-Even Analysis
Introduces break-even analysis and the effects of leverage. Prerequisite: MAT 105 or MAT 110 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

BAS 2123(1) **Course ID: 006108**
Time Value of Money, Capital Budgeting, and Applications
Introduces the time value of money to compute present and future values of funds in the budgeting and managing of working capital. Prerequisite: MAT 105 or MAT 110 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

BAS 2561(1) **Course ID: 015764**
International Culture & Trade
Examines the importance and impact of the economic, cultural, and political environments on global business functions and managerial processes. Pre-requisite: BAS 160 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

BAS 2562(1) **Course ID: 015765**
Global Trade & Foreign Investment
Examines the global trading system, its importance, and the impact of economic, cultural, and political environment on trade and foreign direct investment. Pre-requisite: BAS 2561 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Laboratory

BAS 2563(1) **Course ID: 015766**
Global Marketing
Examines global marketing and product development strategies and how political, economic, and cultural differences impact them. Pre-requisite: BAS 2562 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

BAS 2671(0.5) **Course ID: 005814**
Foundation Principles of Business Law
Introduces students to the state and federal court systems, the judicial system (discovery, trial, and appellate processes), along with business organization/formation and how the law affects each separate entity as it applies to state and federal regulations. Integrates basic legal terminology. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

BAS 2672(0.5) **Course ID: 005815**
Laws and Protection
Introduces students to tort and criminal law, liability, and consumer awareness and protection. Prerequisite: BAS 2671. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

BAS 2673(1) **Course ID: 005816**
Contracts
Introduces law of contracts. Prerequisite: BAS 2672. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

BAS 2674(0.5) **Course ID: 005817**
Property Law
Introduces bailment, ownership of personal property, and real property. Prerequisite: BAS 2673. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

BAS 2675(0.5) **Course ID: 005818**
Research and Negotiable Instruments
Introduces negotiable instruments, government regulations, and methods of legal research. Prerequisite: BAS 2674. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

BAS 2741(0.6) **Course ID: 005150**
The Environment of Human Resource Management
Examines the value of human resource management, individual management responsibilities, and the legal environment. Prerequisite: (BAS 160 and BAS 283) or Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

BAS 2742(0.6) **Course ID: 005151**
Bringing Employees Into the Organization
Identifies the operational requirements of the employee intake function, including HR planning, job analysis, employee recruitment, and employee selection. Prerequisite: BAS 2741 or Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

BAS 2743(0.6) **Course ID: 005152**
Developing and Evaluating Employees
Examines training and development methods, career planning tools, and performance appraisal methods and techniques. Prerequisite: BAS 2742 or Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

BAS 2744(0.6) **Course ID: 005153**
Compensating Employees
Identifies compensation design, pay for performance systems, benefits, and employee services. Pre-requisites: BAS 2743 or Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

BAS 2745(0.6) Course ID: 005154
Employee Relations
Recognizes occupational safety and health adherence, collective bargaining issues, and establishing effective working relationships. Prerequisite: BAS 2744 or Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

BAS 2821(0.5) Course ID: 005288
Introduction to Entrepreneurial Marketing
Introduces small business marketing. Prerequisite: BAS 160 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

BAS 2822(0.5) Course ID: 005289
Environmental Market Strategy Planning
Identifies essential information for an environmental and SWOT analysis in developing marketing objectives for a small business marketing plan. Prerequisite: BAS 2821 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

BAS 2823(0.5) Course ID: 005290
Product and Market Strategies
Examines essential information to develop product and marketing strategies for the small business marketing plan. Prerequisite: BAS 2822 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

BAS 2824(0.5) Course ID: 005291
Market Distribution and Promotion
Identifies information to develop small business distribution and promotion strategies. Prerequisite: BAS 2823 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

BAS 2825(0.5) Course ID: 005292
Pricing Strategies
Identifies pricing strategies for developing small businesses. Prerequisite: BAS 2824 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

BAS 2826(0.5) Course ID: 005293
Market Implementation, Evaluation and Control
Examines information to implement, evaluate and control a small business marketing plan. Prerequisite: BAS 2825 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

BAS 2831(0.5) Course ID: 005819
Introduction to Management
Provides an overview and introduction to management and the evolution of management thought. Prerequisite: BAS 160 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

BAS 2832(0.5) Course ID: 005820
Planning and Decision Making
Examines the planning function as it relates to the relationship to other management functions and creative problem solving and decision making. Prerequisite: BAS 2831 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

BAS 2833(0.5) Course ID: 005821
The Process of Organizing
Examines organizing as a process as it applies to formal and informal organizations. Prerequisite: BAS 2832 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

BAS 2834(0.5) Course ID: 005822
Leading and Staffing
Develops the concepts of leadership and managing change. Examines managing human resources and communication and motivation. Prerequisite: BAS 2833 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

BAS 2835(0.5) Course ID: 005823
Controlling
Examines the different aspects of the principles and theories of control as it relates to management information and decision support systems. Prerequisite: BAS 2834 or Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

BAS 2836(0.5) Course ID: 005824
Special Concerns in Management
Explores international management and succeeding in one's career. Prerequisite: BAS 2835 or Consent of Instructor. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

BAS 2841(0.6) Course ID: 005825
Effective Decision Making & Delegation
Applies strategies and theories of management to demonstrate the effectiveness of sound decision-making skills and the power of delegation. Prerequisite: (BAS 160 and BAS 283) or prior supervisory experience. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

BAS 2842(0.6) Course ID: 005826
Empowerment and Motivation
Examines the theories of motivation and strengthens the manager's ability to guide institutions and followers through periods of change. Prerequisite: BAS 2841. Lecture: 0.6 credit hours (9 contact hours).
Components: Lecture

BAS 2843(0.6) Course ID: 005827
Effective Coaching and Mentoring
Demonstrates importance of delegation and effective use of coaching or mentoring to provide constructive feedback to developing employees. Prerequisite: BAS 2842. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

BAS 2844(0.6) Course ID: 005828
Communication and Teamwork
Applies communication techniques that allow for effective conflict resolution and encourages strong group outcomes. Prerequisite: BAS 2843. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

BAS 2845(0.6) Course ID: 005829
Effective Meetings and Quality Processes
Examines effective techniques for conducting meetings and applying theories of quality management. Prerequisite: BAS 2844. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

BAS 2871(0.6) Course ID: 005155
The Role of the Team Leader
Identifies the new responsibilities of the team leader with emphasis on competencies, planning, and controlling the work environment. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

BAS 2872(0.6) Course ID: 005156
Organizing and Developing Your Team
Recognizes the fundamentals of organizing a work environment, appraising performance, acquiring training, and developing team members. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

BAS 2873(0.6) Course ID: 005157
The Leadership Reins
Examines the attributes of motivation and communication in a variety of leadership styles appropriate for different managerial environments. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

BAS 2874(0.6) Course ID: 005158
Managing the Team Through Conflict and Change
Examines guiding workgroups through constantly changing and challenging work environments in order to achieve organizational priorities. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

BAS 2875(0.6) Course ID: 005159
Decision Making and Problem Solving in a Quality Culture
Identifies principles of effective decision making and problem solving with emphasis on enhancing quality workplace cultures. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

BAS 2881(0.6) Course ID: 005160
Become a Great Leader
Examines leadership philosophies, values, characteristics, and the specific role the leader plays in directing the strategic planning process. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

BAS 2882(0.6) Course ID: 005161
Self Management: Time, Stress, & Effective Change Techniques
Identifies management techniques and skills that provide leaders with the capabilities to maximize both personal and organizational effectiveness. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

BAS 2883(0.6) Course ID: 005162
Effective Delegation and Empowerment
Identifies strategies of delegation and empowerment that facilitate high levels of organizational effectiveness. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

BAS 2884(0.6) Course ID: 005163
Communicating for Interdependence
Identifies the use of effective communication techniques that increase interdependence in workgroups. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

BAS 2885(0.6) Course ID: 005164
Teamwork and Synergy
Emphasizes the power of synergy and the implementation of effective team environments. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

BAS 2891(0.75) Course ID: 015767
Operations & Productivity
Introduces basic operations management concepts including productivity and global operations management challenges. Pre-requisite: BAS 160 or Consent of Instructor. Lecture: 0.75 credits (11.25 contact hours).
Components: Lecture

BAS 2892(0.75) Course ID: 015768
Product Design & Quality
Introduces the concepts of quality management and product/process design, including total quality management, just-in-time, facility layout, and the product life cycle. Pre-requisite: BAS 2891 or Consent of Instructor. Lecture: 0.75 credits (11.25 contact hours).
Components: Lecture

BAS 2893(0.75) Course ID: 015769
Planning and Scheduling
Examines the importance of planning to organizational success with regards to inventory levels and scheduling. Pre-requisite: BAS 2892 or Consent of Instructor. Lecture: 0.75 credits (11.25 contact hours).
Components: Lecture

BAS 2894(0.75) Course ID: 015770
Lean Operations & Supply Chain
Demonstrates the use of lean operations techniques, effective project management processes, and the elements of supply chain management to improve efficiency and effectiveness. Pre-requisite: BAS 2893 or Consent of Instructor. Lecture: 0.75 credits (11.25 contact hours).
Components: Lecture

BAS 2901(1) Course ID: 006103
Moral Philosophy and Business
Examines the nature of morality and the ethical philosophy and nature of business leadership and decision making. Prerequisite: BAS 283 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

BAS 2902(1) **Course ID: 006104**
American Business
Examines the nature of capitalism, the social-government relationship, including the business leadership-government-society relationship. Recognizes the importance of decision making, social cost, corporate responsibility, governance, and the role of government in business. Prerequisite: BAS 2901 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

BAS 2903(1) **Course ID: 006105**
The Organization and Its People
Examines the business leadership-government-society relationship, including the challenges and issues in today's workplace environment with an emphasis on moral choices faced by employees. Prerequisite: BAS 2902 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

BBT Broadband Technology

BBT 100(3) **Course ID: 016692**
Introduction to HFC/Cable-TV
Introduces the basics of the HFC (Hybrid Fiber Coaxial) portion of the broadband industry. Focuses on primary areas: cable and wire - the design of the cables physically and electrically and how to splice them; print reading - construction drawings and system maps/circuit diagrams; station installation - installation of customer materials and equipment and teaching the customers how to properly use the equipment; basic troubleshooting - finding and repairing trouble in materials and equipment; processing requirements for various signals used in the HFC system and signal level meters and signal testing. Covers the transmission of voice and data signals and how they are transmitted to the subscriber and back to the central office. Includes troubleshooting and fault locating techniques used to repair and maintain subscriber equipment. Pre-requisite: MAT 065 or Equivalent Placement Level or Consent of Instructor. Lecture/Lab: 3.0 credits (75 contact hours)
Components: Lecture
Attributes: Technical

BBT 200(2) **Course ID: 016694**
Introduction to Cellular Technology
Introduces the world of wireless communications. Provides information to enhance an understanding of how we use radio frequencies to transmit signals, data, and voice over the airwaves. Provides information regarding how to correctly set up and troubleshoot a variety of equipment used in radio communications. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

BEX Basic Electricity

BEX 100(3) **Course ID: 001118**
Basic Electricity for Non-Majors
This course introduces non-majors to the basic physics of electricity. Students apply Ohm's law; measure resistance, voltage, ohms, watts and amps; construct various types of electrical circuits; select wire and fuse sizes; and learn to troubleshoot an electric motor and coil. Corequisite: BEX 101
Components: Lecture

BEX 101(2) **Course ID: 001119**
Basic Electricity Lab for Non-Majors
This is a hands-on class designed to allow the student to use the concepts, principles, and theories covered in Basic application. Electricity for non-majors BEX 100. Corequisite: BEX 100.
Components: Laboratory

BIO Biological Sciences

BIO 112(3) **Course ID: 000127**
Introduction to Biology
Basic study of structure, function and interactions of living organisms including cell theory, genetics, energetics, evolution and ecology. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science, Course Also Offered in Modules

BIO 113(1) **Course ID: 000133**
Introduction to Biology Lab
Emphasizes basic laboratory studies of structure, function and interactions of living organisms including cell theory, genetics, energetics, evolution, and ecology. Prerequisite/Corequisite: BIO 112. Laboratory: 1 credit (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory, Course Also Offered in Modules

BIO 114(3) **Course ID: 000167**
Biology I
Examines basic biological concepts such as cell structure and function, metabolism, the chemical basis of biology, protein synthesis, genetics, and evolution with emphasis placed on the cellular level. Corequisite: BIO 115. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

BIO 115(1) **Course ID: 000165**
Biology Laboratory I
A two-hour laboratory to be offered concurrently with BIO 114. Designed to acquaint the student with the use of analytical techniques in biology, theory, and methods involved in experimentation, in order to facilitate a greater understanding of concepts presented in lecture and the way in which information is gathered in science. Laboratory: 1 credit (30 contact hours). Corequisite: BIO 114
Components: Laboratory
Attributes: SL - Science Laboratory

BIO 116(3) **Course ID: 000168**
Biology II
Examines basic biological concepts such as ecology, biological diversity (to include the kingdoms of life), reproduction, growth, and development, with emphasis placed on multicellular systems. Corequisite: BIO 117. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

BIO 117(1) **Course ID: 000166**
Biology Laboratory II
A two-hour laboratory to be offered concurrently with BIO 116. Designed to acquaint the student with the use of analytical techniques in biology, theory, and methods involved in experimentation in order to facilitate a greater understanding of concepts presented in lecture and the way in which information is gathered in science. Laboratory: 1 credit (30 contact hours). Corequisite: BIO 116.
Components: Laboratory
Attributes: SL - Science Laboratory

BIO 118(3) **Course ID: 004988**
Microbes and Society
An introduction to the science of microbiology addressing the role of microorganisms in nature and in human welfare. Contemporary topics will include infectious diseases, genetic engineering, the environment and biological warfare. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

BIO 120(3) **Course ID: 000126**
Human Ecology
Interrelationships among humans, other organisms and the environment including principles of energy and matter, resource use, biogeochemical cycling, trophic structures, sustainability and environmental impacts by humans. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

BIO 121(1) **Course ID: 005191**
Introduction to Ecology Laboratory
Basic laboratory studies of interactions among living organisms and their environment including biogeochemical cycling, trophic structures, sustainability and human impacts on the environment. Prerequisite/Corequisite: BIO 120 or BIO 124. Laboratory: 1 credit (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory

BIO 122(3) **Course ID: 000175**
Introduction to Conservation Biology
Historical and current perspectives on species extinction and global loss of biological diversity is presented. Methods used to conserve plant and animal life in the United States and around the world are surveyed, and conservation activities and needs are discussed in societal, cultural, economic, and political contexts. Prerequisite: High school biology recommended. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

BIO 124(3) **Course ID: 000177**
Principles of Ecology
Study of the principles and interrelationships between organisms and their environment with emphasis on the analytical and statistical methods of ecology. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

BIO 130(3) **Course ID: 000170**
Aspects of Human Biology
Aspects of human biology will be introduced from the molecular level to the integrated whole. Attention will be given to the biological bases of various health and wellness issues. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

BIO 132(2) **Course ID: 006819**
Foundations of Cell Biology
Creates a foundation of biology and chemistry as preparation for higher level biology courses. Pre-requisite or Co-requisite: (Placement above or concurrent enrollment in RDG 30) and (placement above or concurrent enrollment in ENC 91) and (placement above or concurrent enrollment in MAT 65) or consent of instructor. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Other

BIO 135(4) **Course ID: 000169**
Basic Anatomy and Physiology with Laboratory
Presents the fundamental structure of the human body and the physiological mechanisms involved in normal functioning are presented through lecture and student participation in laboratory activities. Prerequisite: (Reading and English assessment exam scores above the KCTCS developmental level and a mathematics placement score above the score range for MAT 065 or successful completion of the prescribed developmental course(s) or consent of the instructor. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: SL - Science Laboratory, SN - Science

BIO 137(4) **Course ID: 000172**
Human Anatomy and Physiology I
The interrelationship of structure and function of each body system will be presented in two semesters. The first semester will include basic chemistry, cell structure, cell physiology, metabolism, tissues, and integumentary, skeletal, muscular, and nervous systems. Prerequisite: Reading and English assessment exam scores above the KCTCS developmental level and a mathematics placement score above the score range for MAT 065 or successful completion of the prescribed developmental course(s) or consent of the instructor. Lecture: 3.0 credits (45 contact hours); Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: SL - Science Laboratory, SN - Science, Course Also Offered in Modules

BIO 139(4) **Course ID: 000174**
Human Anatomy and Physiology II
The second semester continues the study of the interrelationships of organ systems, including the endocrine, reproductive, cardiovascular, lymphatic, digestive, respiratory, and urinary systems. Prerequisite: BIO 137. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: SL - Science Laboratory, SN - Science, Course Also Offered in Modules

BIO 140(3) **Course ID: 000130**
Botany
The anatomy, physiology, and biodiversity of plants emphasizing life processes, the cell, development, heredity, plant systems, evolution, taxonomy, phylogeny and ecology. Prerequisite: BIO 112 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

BIO 141(4) **Course ID: 000178**
Botany with Laboratory
The anatomy, physiology, and biodiversity of plants emphasizing life processes, the cell, development, heredity, plant systems, evolution, taxonomy, phylogeny and ecology. Includes laboratory studies of the morphology, physiology, and reproduction of plants with emphasis on flowering plants. Prerequisite: BIO 112 or consent of instructor. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: SL - Science Laboratory, SN - Science

BIO 142(3) **Course ID: 000128**
Zoology
The anatomy, physiology, and biodiversity of animals emphasizing life processes, the cell, development, heredity, body systems, evolution, taxonomy, phylogeny and ecology. Prerequisite: BIO 112 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

BIO 143(4) **Course ID: 000180**
Zoology with Laboratory
The anatomy, physiology, and biodiversity of animals emphasizing life processes, the cell, development, heredity, body systems, evolution, taxonomy, phylogeny and ecology. Prerequisite: BIO 112 or consent of instructor. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: SL - Science Laboratory, SN - Science

BIO 144(3) **Course ID: 002215**
Insect Biology
Presents an overview of the biology of both beneficial and detrimental insects including physiology, behavior, ecology, and evolution. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

BIO 150(3) **Course ID: 000135**
Principles of Biology I
Presents knowledge of biological principles at the cellular and molecular levels, similarities and differences in structure and function of simple and complex cells and theories on the origin and evolution of biological systems. Part one of a two semester sequence (BIO 150 and BIO 152). Lecture: 3 credits (45 contact hours). Prerequisite: (CHE 170 or concurrent enrollment) or consent of instructor.
Components: Lecture
Attributes: SN - Science

BIO 151(2) **Course ID: 000136**
Principles of Biology Laboratory I
Includes studies of cellular and molecular biology. Laboratory: 2 credits (60 contact hours). Prerequisite: BIO 150 or Concurrent enrollment.
Components: Laboratory
Attributes: SL - Science Laboratory

BIO 152(3) **Course ID: 000137**
Principles of Biology II
Presents knowledge of organismal, population and community biology. Part two of a two semester sequence (BIO 150 and BIO 152). Lecture: 3 credits (45 contact hours). Prerequisite: BIO 150 or consent of instructor.
Components: Lecture
Attributes: SN - Science

BIO 153(2) **Course ID: 000138**
Principles of Biology Laboratory II
Includes organismal, population and community biology. Laboratory: 2 credits (60 contact hours). Prerequisite: BIO 152 or concurrent.
Components: Laboratory
Attributes: SL - Science Laboratory

BIO 155(3) **Course ID: 006342**
Astrobiology
Examines topics related to the origins of planets, the requirements for life, the search for life away from Earth, the societal implications of discovering other forms of life, and the future of life on Earth and in space from a multidisciplinary perspective. Credit not available for both BIO 155 and AST 155. Prerequisite: MT065 and ENC091or equivalent as determined by KCTCS placement examination. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: AST 155
Attributes: SN - Science

BIO 155(1) **Course ID: 016428**
Introductory Biology Laboratory
This course is designed to provide a broad introduction into the data, results, and information associated with biological research, and into some of the analytical approaches used to test biological hypotheses. Communication of these aspects of biological research is crucial, and much of this lab course will be focused on the development of effective writing skills for the delivery of this information. Pre-requisite: Math ACT of 23 or above or MA 109, past or current enrollment in CHE 105 (KCTCS equivalents: MA 109=MAT 150; CHE 105=CHE 170). Laboratory: 1 credit hour (2 contact hours).
Components: Laboratory
Attributes: University Course (University of Kentucky)

BIO 209(2) **Course ID: 000142**
Introductory Microbiology Laboratory
Laboratory exercises in general microbiology. Laboratory: 4 hours. Prerequisite: One unit of chemistry or consent of instructor. BIO 208/226 should be taken concurrently.
Components: Laboratory
Attributes: SL - Science Laboratory

BIO 216(4) **Course ID: 006807**
Biological Inquiry and Analysis
An inquiry-based introduction to concepts in biology. Research-oriented activities will emphasize the skills and attitudes necessary for understanding and conducting scientific inquiry. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: University Course (Murray State University)

BIO 220(3) **Course ID: 000139**
The Genetic Perspective
Covers introductory genetics for non-science majors examining how heredity affects humans and the remainder of the living world and providing some insights into other fields of science from the geneticists' perspective. Prerequisite: BIO 112 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

BIO 225(4) **Course ID: 000182**
Medical Microbiology
The characteristics of microorganisms and their relation to health and disease are studied. Prerequisite: BIO 137 and BIO 139 or equivalent. Lecture: 2 credits (30 contact hours); Laboratory: 2 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: SL - Science Laboratory, SN - Science, Course Also Offered in Modules

BIO 226(3) **Course ID: 000140**
Principles of Microbiology
Introduction to fundamental microbiological principles and techniques emphasizing structural functional, ecological, and evolutionary relationships among microorganisms. Prerequisite: BIO 112 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

BIO 227(5) **Course ID: 004989**
Principles of Microbiology with Laboratory
Introduction to fundamental microbiological principles and techniques emphasizing structural, functional, ecological, and evolutionary relationships among microorganisms. Includes laboratory exercises in general microbiology. Prerequisite: BIO 112 or consent of instructor. Lecture: 3 credits (45 contact hours); Laboratory: 2 credit (60 contact hours).
Components: Laboratory, Lecture
Attributes: SL - Science Laboratory, SN - Science

BIO 295(1 - 3) **Course ID: 000195**
Instructor Consent Required
Independent Investigation In Biology
Investigates specific topics or problems in the field of the biological sciences. May be repeated for a maximum of six credits. Laboratory varies with credit. Prerequisite: Permission of Instructor. Laboratory: Varies with credit.
Components: Independent Study, Lecture

BIO 299(1 - 3) **Course ID: 000197**
Instructor Consent Required
Selected Topics In Biology: (Topic)
Addresses recent trends and discoveries in selected areas of biology in a seminar format. Emphasizes discussion and critical thinking. May be repeated with different subtitle for a maximum of six credits. Prerequisite: Permission of Instructor. Lecture: Varies with credit.
Components: Lecture
Attributes: Other

BIO 1121(0.75) **Course ID: 006122**
Science, Biochemistry, and Hierarchy of Life
Covers basic studies of the Scientific method, the molecules of life and the hierarchy of life. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

BIO 1122(0.75) **Course ID: 006123**
Cell Structure, Function, Energetics, and Cell Division
Covers basic studies of cell structure, function, energetics, and cell division. Prerequisite: BIO 1121. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

BIO 1123(0.75) **Course ID: 006124**
Classification System, Genetics, and Evolution
Covers basic studies of the classification system, genetics, and evolution. Prerequisite: BIO 1122. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

BIO 1124(0.75) **Course ID: 006125**
Ecology and Population Dynamics
Covers basic studies of ecology and population dynamics. Prerequisite: BIO 1123. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

BIO 1203(1) **Course ID: 016647**
Pollution Impacts
Parent description: Interrelationships among humans, other organisms and the environment including principles of energy and matter, resource use, biogeochemical cycling, trophic structures, sustainability and environmental impacts by humans. This module emphasizes human impacts on ecosystems. Agriculture, toxic risks, pollution, and waste management are covered. Pre-requisite: BIO 1202. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

BIO 1351(1) **Course ID: 016826**
Cells, Skin & Bones
Presents the fundamental structure of the human body including Cell and Cellular Physiology, the Integumentary System, and the Skeletal System. Covers the physiological mechanisms involved in normal functioning presented through lecture and student participation in laboratory activities. Pre-requisite: Reading and English assessment exam scores above the KCTCS developmental level and a mathematics placement score above the score range for MAT 065 or successful completion of the prescribed developmental course(s) or consent of the instructor. Laboratory: 0.75 credits (11.25 contact hours). Clinical: 0.25 credits (7.5 contact hours).
Components: Clinical, Laboratory

BIO 1352(1) **Course ID: 016827**
Muscle, Regulators & Generation
Presents the fundamental structure of the human body including the Muscular System, Nervous system, Endocrine System, and Reproductive System. Covers the physiological mechanisms involved in normal functioning presented through lecture and student participation in laboratory activities. Pre-requisite: BIO 1351 or Consent of Instructor. Lecture: 0.75 credits (11.25 contact hours). Laboratory: 0.25 credits (7.5 contact hours)
Components: Laboratory, Lecture

BIO 1353(1) **Course ID: 016828**
Lymph, Blood & Gases Lymph, Blood & Gases
Presents the fundamental structure of the human body including the Lymphatic System, Cardiovascular System, and Respiratory System. Covers the physiological mechanisms involved in normal functioning presented through lecture and student participation in laboratory activities. Pre-requisite: BIO 1352 or Consent of Instructor
Components: Laboratory, Lecture

BIO 1354(1) **Course ID: 016829**
Digestive, Renal & Electrolytes
Presents the fundamental structure of the human body including the Digestive System, the Urinary System, and Water and Electrolyte Balance. Covers the physiological mechanisms involved in normal functioning presented through lecture and student participation in laboratory activities. Pre-requisite: BIO 1353 or Consent of Instructor. Lecture: 0.75 credits (11.75 contact hours). Laboratory: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

BIO 1371(1) **Course ID: 006651**
Chemistry and Cells
Provides an introduction to cell chemistry, cell structure and function, and the homeostatic relationship among all body systems. There is also an overview of all systems of the body, body regions, directions, and cavities. Pre-requisite: Reading, English, and Mathematics assessment exam scores above the KCTCS developmental placement level or successful completion of the prescribed developmental course(s) or consent of instructor. Lecture/Lab:1.0 credit (18.75 credit hours).
Components: Lecture

BIO 1372(1) **Course ID: 006652**
Tissue, Skin & Skeleton
Provides an introduction to the structure and function of major tissue types and anatomy and physiology of the integumentary and skeletal systems as well as common dysfunctions of these. Pre-requisite: BIO 1371. Lecture/Lab: 1.0 credit (18.75 contact hours).
Components: Lecture

BIO 1373(1) **Course ID: 006653**
Muscles and Metabolism
The interrelationship and structure and function of the muscular system and how it is involved in maintaining homeostasis and how it relates to biochemistry and metabolism. There is also a focus on muscular anatomy and movements. Pre-requisite: BIO 1371 and BIO 1372. Lecture/Lab: 1.0 credit (18.75 contact hours).
Components: Lecture

BIO 1374(1) **Course ID: 006654**
Nervous System
Provides an introduction to the anatomy and physiology of the nervous system as well as common dysfunctions of this system. Pre-requisite: BIO 1371, BIO 1372, and BIO 1373. Lecture/Lab: 1.0 credit (18.75 contact hours).
Components: Lecture

BIO 1391(1) **Course ID: 006655**
Endocrine and Reproduction
Provides an introduction to the anatomy and physiology of the endocrine and reproductive systems as. Pre-requisite: BIO 137. Lecture/Lab: 1.0 credit (18.75 contact hours).
Components: Lecture

BIO 1392(1) **Course ID: 006656**
Digestive and Lymphatic System
Provides an introduction to the anatomy and physiology of the digestive and lymphatic systems as well as common dysfunctions of these systems. Pre-requisite: BIO 1391. Lecture/Lab: 1.0 credit (18.75 contact hours).
Components: Lecture

BIO 1393(1) **Course ID: 006657**
Cardiovascular System
Provides an introduction to the anatomy and physiology of the cardiovascular system as well as common dysfunctions of this system. Pre-requisite: BIO 1391 and BIO 1392. Lecture/Lab: 1.0 credit (18.75 contact hours).
Components: Lecture

BIO 1394(1) **Course ID: 006658**
Respiratory and Urinary
Provides an introduction to the anatomy and physiology of the respiratory and urinary systems as well as common dysfunctions of these systems. Also provides an overview of the physiological processes of water and electrolyte balance and mechanisms of homeostasis within these systems. Pre-requisite: BIO 1391, BIO 1392, BIO 1393. Lecture/Lab: 1.0 credit (18.75 contact hours).
Components: Lecture

BIOL Biological Sciences

BIOL 110(3) **Course ID: 006760**
Inquiry Biology for Teachers
Introduces the study of living things, cell structure and function, photosynthesis, respiration, reproduction, growth, heredity, evolution, and ecology. It is NOT ACCEPTABLE for biology majors, minors, or areas. This course satisfies the area studies-natural and mathematical sciences for general education only for education majors. Lecture: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: University Course (Morehead State University)

BMO Business and Office Technology

BMO 170(3) **Course ID: 001125**
Introduction to Business Management
This course introduces the concepts and principles of effective business management and includes forms of business ownership, typical business organizational structures, relationship of business to the community, and the effect of government regulations on businesses.
Components: Lecture
Attributes: Technical

BMO 270(3) **Course ID: 001130**
Business Management
This course further develops concepts and principles needed for managing a business or department within a business. Problem-solving activities and case studies are used in researching the position of the manager in the typical business. Product and service promotion in business; the effects government regulations have on a business; and educational requirements of a professional management career are topics covered in the course. Prerequisite: BMO 170
Components: Lecture
Attributes: Technical

BMT Biomedical Equipment Technology

BMT 100(1) **Course ID: 001131**
Hazardous Risks Encountered by BMETs and Methods of Prevention
Emphasizes origin of hazardous occurrences within a healthcare setting encountered by Biomedical Equipment Technicians and the appropriate methods used to eliminate, reduce or avoid such occurrences. Addresses safety concerns associated with fire, medical gases, radiation, body fluids, microorganisms, devices, and people. Prerequisite: Reading assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses. Prerequisite or corequisite: AIT 100 or consent of instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical

BMT 110(2) **Course ID: 001133**
BMET Career Perspectives and Field Practices
Provides information on employment and career advancement opportunities as well as practices in support of a hospital-wide safety program. Prerequisite: BMT 100. Lecture/Lab: 2 credits (37.5 contact hours). (30:1 Ratio Lab).
Components: Lecture
Attributes: Technical

BMT 120(4) **Course ID: 001135**
Essentials of Analog and Digital Electronics for BMETs: Level 1
Emphasizes basic analog and digital devices and associated circuits as well as their use within medical equipment. Prerequisite or corequisite: AIT 110. Lecture/Lab: 4 credits (75 contact hours). (30:1 Ratio Lab).
Components: Lecture
Attributes: Technical

BMT 130(4) **Course ID: 005953**
Essentials of Analog and Digital Electronics for BMETs: Level 2
Emphasizes advanced analog and digital devices and associated circuits as well as their use within medical equipment. Prerequisite: BMT 120 . Lecture/Lab: 4 credits (75 contact hours) (30:1 Ratio Lab)
Components: Lecture

BMT 140(4) **Course ID: 005954**
Biomedical Instrumentation and Biophysical Measurements
Emphasizes biophysical signals and measurements obtained from the human body, their clinical significance, factors which may affect their appearance or numerical value, and the technology used to detect, process, display and record such information. Prerequisite: BMT 130 and BIO 135 Prerequisite or corequisite: PH 171. Lecture/Lab: 4 credits (90 contact hours). (30:1 Ratio Lab).
Components: Lecture
Attributes: Technical

BMT 210(1) **Course ID: 001138**
Fundamental Engineering Design Principles Encountered in Medical Technology
Emphasizes a variety of engineering and scientific principles and their applications in the design and operation of medical equipment including pressure, fluid mechanics, thermodynamics, optics, and sound. Prerequisite: PH 171 and (MT 125 or higher). Lecture/Lab: 1 credit (18 contact hours) (30: 1 Ratio).
Components: Lecture
Attributes: Technical

BMT 215(4) **Course ID: 005966**
Principles and Practices of Medical Equipment Maintenance and Management
Investigates key aspects of a Medical Technology Management Program. Emphasizes medical device service principles and practices including inspecting, testing, maintenance, calibration, and repairs. Prerequisite: BMT 110. Corequisite: BMT 230. Lecture/Lab: 4 credits (75 contact hours) (30:1 Ratio Lab).
Components: Lecture

BMT 230(3) **Course ID: 001140**
Understanding, Maintaining, and Servicing Medical Equipment
Explores the purpose and functionality of various types of medical technology as well as their performance testing, maintenance, and management requirements. Prerequisite: BMT 130. Prerequisite or corequisite: BMT 140 and BMT 215. Lecture/Lab: 3 credits (60 contact hours).(30:1 Ratio Lab).
Components: Lecture
Attributes: Technical

BMT 240(3) **Course ID: 001141**
Understanding, Maintaining, and Servicing Specialized Medical Equipment
Explores the purpose and functionality of various types of specialized medical technology as well as their performance testing, maintenance, and management requirements. Emphasizes mechanical ventilators, anesthesia machines, hemodialysis machines, video endoscopy systems, and other imaging modalities such as digital radiography, fluoroscopy, and diagnostic ultrasound. Prerequisite: BMT 130 or consent of instructor, BMT 210 and BMT 215. Prerequisite or corequisite: BMT 110. Lecture/Lab: 3 credits (60 contact hours). (30:1 Ratio Lab)
Components: Lecture
Attributes: Technical

BRX Blueprint Reading

BRX 110(2) **Course ID: 001146**
Basic Blueprint Reading for Machinist
Basic applied math, lines, multi-view drawings, symbols, various schematics and diagrams, dimensioning techniques, sectional views, auxiliary views, threads and fasteners, and sketching typical to all shop drawings are presented. Safety will be emphasized as an integral part of the course. Lecture: 2 credit hours (30 contact hours).
Components: Lecture
Attributes: Technical

BRX 112(4) **Course ID: 001147**
Blueprint Reading for Machinist
Provides the student with a beginning and advanced series of lectures, demonstrations, and practice exercise in the study of prints. Safety will be emphasized as an integral part of this course. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: Technical

BRX 120(3) **Course ID: 001148**
Basic Blueprint Reading
Includes basic applied math, lines, multiview drawings, symbols, various schematics and diagrams, dimensioning techniques, sectional views, auxiliary views, threads and fasteners, and sketching typical to all shop drawings. Emphasizes safety as an integral part of the course. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: ELT 102
Attributes: Course Also Offered in Modules, Technical

BRX 210(2) **Course ID: 001151**
Mechanical Blueprint Reading
Provides the student with an advanced series of lectures, demonstrations, and practice exercises in the study of prints involving math (both decimal and metric), combination of lines, multi-view drawings, assembly drawings, fasteners, machining and construction processes, datum coordinates, numerical control prints, sheet metal prints, welding, casting and forging prints. Safety will be emphasized. Lecture: 2 credits (30 contact hours). Prerequisite: BRX 110 with a grade of "C" or greater or Consent of Instructor.
Components: Lecture
Attributes: Technical

BRX 220(3) **Course ID: 001150**
Blueprint Reading for Construction
Provides a series of lectures, demonstrations, and practice exercises in the study of symbols, views, sections, details, and material lists found on architectural working drawings, building materials and specifications lists, and construction dimensioning systems and charts/schedules.
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

BRX 1201(1) **Course ID: 005631**
Print Reading Fundamentals
Presents basic applied math, lettering, lines, multiview drawings, title blocks, material lists and the drawing change system. Lecture: 1 credit (15 contact hours).
Components: Lecture

BRX 1202(1) **Course ID: 005632**
Drawing Views and Setup
Presents sketching, auxiliary and sectional views. Prerequisite: (BRX 1201 with a grade of "C" or better) or consent of instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

BRX 1203(1) **Course ID: 005633**
Dimensioning and Tolerances
Presents print dimensioning and tolerances and thread specifications. Prerequisite: (BRX 1202 with a grade of "C" or better) or consent of instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

BRX 2201(1) **Course ID: 016150**
Basic Construction Prints
Provides a series of lectures, demonstrations, and practice exercises in the study of symbols, views, sections, details, and material lists found on architectural working drawings and construction dimensioning systems and measurements. Lecture: 1.0 credits. (15 contact hours).
Components: Lecture

BRX 2202(2) **Course ID: 016151**
Construction Blueprints
Provides a series of lectures and practice exercises in the study of symbols, views, sections, details, and material lists found on architectural working drawings, building materials and specifications lists, and charts/schedules. Pre-requisite: BRX 2201 or Consent of Instructor. Lecture: 2.0 credits (30 contact hours).
Components: Lecture

BSE Building Science Engineering

BSE 150(5) **Course ID: 006867**
Energy Auditor Preparation
Provides a scientific foundation upon which inspectors and auditors can build an accurate understanding of modern structures including an overview of technology, examples of typical installations and their defects, procedures for performing audits, and guidelines for analyzing potential retrofits. Presents a balanced approach to building performance to address energy efficiency, building durability, and human health. Lecture/Lab: 5.0 credits (90 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

BTN Biotechnology Laboratory Technician

BTN 100(4) **Course ID: 007277**
Contextual Science with Laboratory
Introduces students to laboratory focused concepts and skills necessary for entry-level positions in a biotechnology laboratory. Exposes students to selected laboratory exercises that parallel the concepts introduced in BTN 103 and BTN 104. Co-requisite: BTN 103, BTN 104. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture

BTN 101(1) **Course ID: 004277**
Introduction to Biotechnology
Introduces current and future applications of biotechnology. Covers biotechnology career opportunities and bioethics. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

BTN 102(4) **Course ID: 007077**
Introduction to Biotechnical Engineering
Project Lead The Way® course in Biotechnical Engineering. Exposes students to the diverse fields of biotechnology including biomedical engineering, bio-molecular genetics, bioprocess engineering, as well as agricultural and environmental engineering. Engages students in engineering design problems related to biomechanics, cardiovascular engineering, genetic engineering, agricultural biotechnology, tissue engineering, biomedical devices, human interface, bioprocesses, forensics, and bio-ethics. Pre-requisite or Co-requisite: Successful completion of, or concurrent enrollment in, high school biology or chemistry course or equivalent; or consent of instructor. Lecture/Lab: 4.0 credits (105 contact hours).
Components: Lecture
Attributes: Technical

BTN 103(3) **Course ID: 007278**
Contextual Laboratory Language
Introduces students to basic scientific language and concepts of biotechnology. Academic study skills needed for success in bioscience courses will be emphasized. Covered topics parallel the concepts introduced in BTN 100 and BTN 104. Co-requisite: BTN 100 and BTN 104. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

BTN 104(3) **Course ID: 007279**
Contextual Laboratory Math
Introduces concepts of basic laboratory calculations emphasizing practical applications in biotechnology laboratories. Covered topics parallel the concepts introduced in BTN 100 and BTN 103. Co-requisite: BTN 100 and BTN 103. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

BTN 105(3) **Course ID: 007346**
Applied Laboratory Calculations for Biotechnology
Introduces concepts, techniques, and applications of common basic laboratory calculations that are routinely used in the biotechnology laboratory. Emphasizes application of basic computational concepts required of biotechnicians. Requires students to apply strategies to calculate amounts of chemicals required to make solutions, calibrate instruments, collect data, and interpret data. Introduces some computer applications. Pre-requisite: MAT 065 or equivalent as determined by KCTCS examination. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

BTN 106(3) **Course ID: 007280**
Fundamentals of Scientific Communication
Introduces methods and strategies necessary for written, oral, and visual communications as they are used in popular science. Lecture: 3.0 credits (45 contact hours).
Components: Laboratory
Attributes: Technical

BTN 110(4) **Course ID: 004984**
Nucleic Acid Methods
Covers theory of DNA structure and function. Emphasizes laboratory skills in a variety of DNA manipulations. Prerequisite: One semester of college biology with lab or college chemistry with lab or consent of instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

BTN 115(4) **Course ID: 007347**
Biomanufacturing
Surveys basic biomanufacturing principles and procedures designed to assure the quality and safety of a product as the manufacturing team moves the product down the biotechnology production pipeline. Introduces upstream and downstream manufacturing processes through a combination of lecture and laboratory activities. Emphasizes the role of government oversight and regulation during discovery, development, and manufacturing of bioproducts as outlined in the Good Laboratory and Good Manufacturing Practices (GLP and GMP) of the Food and Drug Administration (FDA). Pre-requisite: Completion of BTN 201 and BTN 202 with a grade of "C" or better, or permission of program coordinator. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

BTN 120(4) Course ID: 007348
Biofuels
Introduces students to combustion fuels made from nonpetroleum sources, and includes topics on feedstocks, processing, utilization, and social impacts. Pre-requisite: Completion of BTN 201 and BTN 202 with a grade of "C" or better, or permission of program coordinator. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

BTN 125(2) Course ID: 007349
Bioinformatics I
Introduces the concepts and tools used in the application of information technology to the field of biology. Includes methods for data collection, storing and accessing biological data, fundamentals of sequence alignment, biological molecule structure prediction, and data mining and analysis. Pre-requisite or Co-requisite: Completion of, or concurrent enrollment in BTN 201 and BTN 202. Lab: 2.0 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

BTN 126(2) Course ID: 007350
Bioinformatics II
Applies concepts introduced in BTN 125 in the design and implementation of basic programming relating to bioinformatics problems. Emphasizes current trends in bioinformatics programming language, databases, and technology. Pre-requisite: Completion of BTN 125 with a grade of "C" or better or permission of program coordinator. Lab: 2.0 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

BTN 160(4) Course ID: 007351
Introduction to Agricultural Biotechnology
Introduces theory and methods relating to applications of biotechnology in agriculture. Emphasizes emerging laboratory technologies in the area of agricultural biotechnology including food and natural resource management. Explores plant and animal genetic engineering. Pre-requisite: BTN 201 and BTN 202 with a grade of "C" or better, or permission of the program coordinator. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

BTN 201(4) Course ID: 005620
Biotechnology Techniques I
Introduces theory and techniques for media and solution preparations, use of analytical equipment, and laboratory safety. Includes various nucleic acid techniques, gene expression and purification, and bioinformatics. Prerequisite: A semester of college biology with lab or college chemistry with lab or consent of instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

BTN 202(4) Course ID: 005621
Biotechnology Techniques II
Covers various protein techniques, extraction and purification, and assays. Prerequisite: BTN 201. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

BTN 210(4) Course ID: 004985
Cell Culture and Function
Covers use of cell culture in modern biotechnological applications with emphasis on laboratory skills in a variety of cell culture techniques. Prerequisite: (BTN 110 with a grade of "C" or better) or consent of instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

BTN 220(4) Course ID: 004986
Immunological Methods
Covers immunological theory and applications with focus on techniques such as isolation, purification, and labeling of antibody molecules. Prerequisite: (BTN 110 with a grade of "C" or better) or consent of instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

BTN 225(4) Course ID: 007352
Protein Bioseparation Methods
Introduces the strategies to purify proteins as part of a biotechnology process. Introduces specific methods such as activity assays for enzymes, extraction of proteins from bacterial cells, salting out, dialysis, ion exchange chromatography, and polyacrylamide gel electrophoresis. Pre-requisite: Completion of BTN 201 and BTN 202 with a grade of "C" or better, or permission of the program coordinator. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

BTN 295(1 - 3) Course ID: 007353
Independent Investigation in Biotechnology
Investigates specific topics or problems in the field of the biotechnology under direction of the faculty. May be repeated for a maximum of six credits. Laboratory varies with credit. Pre-requisite: Permission of instructor. Lab: 1.0 - 3.0 credits (30-90 contact hours).
Components: Laboratory
Attributes: Technical

BTN 298(1 - 8) Course ID: 007354
Biotechnology Learning Laboratory
Provides contextual, real-world experience and an opportunity to reinforce previously learned concepts, skills, and critical thinking ability related to business and technical job functions typical of biotechnology companies. Prepares students to conduct mentored activities on various workforce projects assigned by Biotechnology faculty/ staff or in collaboration with biotechnology companies at the Learning Laboratory. Emphasizes twenty-first century skills and workforce readiness. May be repeated for a maximum of 8 credits. Pre-requisite or Co-requisite: Completion of BTN 201 and BTN 202 with a C or better, or permission of program coordinator. Practicum: 1.0 - 8.0 credits (60-480 contact hours).
Components: Practicum
Attributes: Technical

BTN 299(1 - 3) Course ID: 007355
Selected Topics in Biotechnology
Addresses recent trends and discoveries in selected areas of biotechnology in a seminar format. Emphasizes discussion and critical thinking. May be repeated for a maximum of 12 credits if topics and/or learning outcomes vary. Pre-requisite: Permission of instructor. Lecture: 1.0 - 3.0 credits (15-45 contact hours).
Components: Lecture
Attributes: Technical

BTS Biomedical Technology Systems

BTS 100(1) Course ID: 007224
Biomedical Technology Systems: A Career Perspective
Offers insight into the profession for which services are provided to Biomedical Technology Systems with regards to career opportunities, job expectations, and professional growth. Pre-requisite: RDG 30 or equivalent based on KCTCS placement exam. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

BTS 110(1) Course ID: 007225
Environmental Risks and Precautionary Measures for the BTS Service Professional
Presents potential risks for which those involved with Biomedical Technology Systems will encounter and precautionary measures taken to assure that no harm is done. Focuses on safety awareness and management throughout the entire healthcare setting including identifying risks associated with the use and maintenance of medical technologies. Pre-requisite: RDG 30 or equivalent based on KCTCS placement exam. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

BTS 120(2) Course ID: 007226
Essentials of Biomedical Electronics I
Presents basic analog and digital semiconductor devices and their applications within medical products. Addresses how to read electronic schematics and apply basic troubleshooting skills to circuits that utilize both discrete components and integrated circuits. Focuses on such devices as diodes, transistors, thyristors, logic gates and flip-flops, and digital timing devices. Pre-requisite: AIT 1101with a grade of "C" or better. Lecture/Lab: 2.0 credits (37.5 contact hours).
Components: Lecture
Attributes: Technical

BTS 125(2) Course ID: 007227
Essentials of Biomedical Electronics II
Continues the presentation of analog and digital semiconductor devices by introducing more complex devices and their applications within medical products than those introduced in BTS 120. Addresses how to read electronic schematics and apply basic troubleshooting skills to circuits that utilize integrated-packaged devices and the systems that comprise them. Focuses on such devices as operational amplifiers, combinational and sequential logic devices, microprocessors, microcontrollers, and programmable logic devices. Emphasis is also given to communication circuits used in medical products. Pre-requisite: BTS 120 with a grade of "C" or better. Lecture/Lab: 2.0 credits (37.5 contact hours).
Components: Lecture
Attributes: Technical

BTS 130(2) Course ID: 007228
Medical Equipment Management I
Presents medical technology management, principles and practices with regard to medical equipment assessment, planning, acquisition, acceptance, and replacement and disposal. Pre-requisite: BTS 100, BTS 110 and AIT 1101(each with a grade of "C" or better). Lecture/Lab: 2.0 credits (37.5 contact hours).
Components: Lecture
Attributes: Technical

BTS 140(1) Course ID: 007229
Science Principles Employed in Medical Technologies
Presents physical and chemical science principles that are incorporated into medical devices and systems for the purpose of providing greater understanding into the design and operation of such technologies. Focuses on medical technologies that utilize principles involving light, sound, fluid dynamics, heat transfer, and electrochemistry. Pre-requisite: PHY 171. Pre-requisite or Co-requisite: BTS 125. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

BTS 200(2) Course ID: 007230
Patient Care Support and Management Systems
Presents systems employed throughout healthcare in support of patient care and patient management efforts with regard to their application, operation, and routine evaluation. Emphasizes systems that influence patient care in an indirect manner rather than directly providing patient care. Focuses on variety of systems including utility power systems, water and medical gas systems, nurse call systems, patient beds, sterilizers, infant abduction systems, and telemedicine. Pre-requisite: BTS 125 with a grade of "C" or better. Lecture/Lab: 2.0 credits (37.5 contact hours).
Components: Lecture
Attributes: Technical

BTS 210(2) **Course ID: 007231**
Diagnostic Medical Equipment and Non-Radiographic Imaging Modalities
Presents medical equipment and instrumentation used to assess biophysical signals and images for diagnostic purposes. Examines such technology in terms of principles of operation and measuring its performance. Focuses on a variety of diagnostic technologies including the electrocardiograph and electroencephalograph machines, the pulmonary function analyzer, video endoscopy systems, ultrasound-generating machines, and magnetic resonance imaging (MRI) systems. Pre-requisite: BIO 135, BTS 110, BTS 125, and BTS 140 (each with a grade of "C" or better). Lecture/Lab: 2.0 credits (37.5 contact hours).
Components: Lecture
Attributes: Technical

BTS 220(2) **Course ID: 007232**
Laboratory Devices, Instruments, and Analyzers
Presents instruments employed in the clinical laboratory setting with regard to purpose, design, maintenance, and management. Focuses on technologies such as centrifuges, microscopes, hematology analyzers, blood gas analyzers, electrolyte analyzers, clinical chemistry analyzers, and tissue processors. Pre-requisite: BIO 135 with a grade of "C" or better BTS 110 with a grade of "C" or better BTS 125 with a grade of "C" or better BTS 140 with a grade of "C" or better. Lecture/Lab: 2.0 credits (37.5 contact hours).
Components: Lecture
Attributes: Technical

BTS 230(2) **Course ID: 007233**
Medical Equipment Management II
Presents medical technology management principles and practices with regard to ongoing training of staff, ongoing medical equipment maintenance, ongoing risk management, and ongoing quality assurance necessary to assure that equipment is safe and adequately maintained. Focuses on record keeping and compliance with codes, standards, and regulations. Pre-requisite: BTS 130 with a grade of "C" or better. Lecture/Lab: 2.0 credits (37.5 contact hours).
Components: Lecture
Attributes: Technical

BTS 250(2) **Course ID: 007234**
Introduction to Medical-Based IT Networks and Standards
Presents IT networks employed throughout the healthcare setting that are interconnected to patient care equipment and record management systems. Includes communication standards and risk management standards used by such networks. Pre-requisite: CIT 160. Pre-requisite or Co-requisite: CIT 180. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

BTS 260(2) **Course ID: 007235**
Radiographic Imaging Modalities
Presents radiographic imaging systems routinely employed in health care settings with regard to the technology, theory of operations, and quality assurance testing. Emphasizes a variety of technologies including both analog and digital radiographic and fluoroscopic machines, mammography units, computed axial tomography (CAT) scanners, and bone densitometers. Pre-requisite: BIO 135, BTS 110, BTS 125, BTS 140 and BTS 230 (each with a grade of "C" or better). Lecture/Lab: 2.0 credits (37.5 contact hours).
Components: Lecture
Attributes: Technical

BTS 270(2) **Course ID: 007236**
Therapeutic Equipment Modalities I
Presents therapeutic medical equipment typically utilized within the perioperative and intensive care settings. Focuses on clinical applications, circuit design and circuit operation, operator controls and equipment setup, managing device alarms, addressing maintenance requirements, and meeting performance and safety standards. Emphasizes a variety of medical technologies including IV pumps, electrosurgical units, defibrillators, mechanical ventilators, anesthesia machines, infant incubators, and surgical lasers. Pre-requisite: BIO 135, BTS 125, and BTS 140 (each with a grade of "C" or better). Lecture/Lab: 2.0 credits (37.5 contact hours).
Components: Lecture
Attributes: Technical

BTS 275(2) **Course ID: 007237**
Therapeutic Equipment Modalities II
Presents therapeutic medical equipment typically utilized outside the perioperative and intensive care settings primarily towards physical therapy and treatment interventions. Focuses on clinical applications, circuit design and circuit operation, operator controls and equipment setup, managing device alarms, addressing maintenance requirements, and meeting performance and safety standards. Emphasizes a variety of medical technologies including therapeutic ultrasound units, electrical stimulation units, dialysis machines, oxygen concentrators, and hyperbaric chambers. Pre-requisite: BTS 270 and BTS 230(each with a grade of "C" or better). Lecture/ Lab: 2.0 credits (37.5 contact hours).
Components: Lecture
Attributes: Technical

BTS 280(2) **Course ID: 007238**
General Care Monitoring and Instrumentation
Presents various physiological parameters measured in low and mid-acuity situations typically encountered in general care settings along with the instrumentation used to obtain such information. Focuses on how the technology works and how to evaluate its performance and safety. Emphasis is given to a variety of medical technologies including scales, thermometers, general electrocardiograph monitors, non-invasive blood pressure monitors, pulse oximeters, and spirometers. Pre-requisite: BIO 135, BTS 125, and BTS 140 (each with a grade of "C" or better). Pre-requisite Or Co-requisite: BTS 230. Lecture/Lab: 2.0 credits (37.5 contact hours).
Components: Lecture
Attributes: Technical

BTS 285(2) **Course ID: 007239**
Critical Care Monitoring and Instrumentation
Continues the presentation of various physiological parameters measured in mid and high acuity situations typically encountered in intensive/critical care settings along with the instrumentation used to obtain such information. Focuses on how the technology works and how to evaluate its performance and safety. Emphasizes a variety of medical technologies including advanced electrocardiograph monitors, invasive pressure monitors, cardiac output monitors, anesthetic gas monitors, and fetal monitors. Pre-requisite: BTS 280 and BTS 230 (both with a grade of "C" or better). Pre-requisite or Co-requisite: BTS 250. Lecture/Lab: 2.0 credits (37.5 contact hours).
Components: Lecture
Attributes: Technical

BTS 290(2) **Course ID: 007240**
Clinical Experience in Biomedical Technology Systems
Provides an opportunity for the student to apply their knowledge and skill regarding various biomedical technology systems and equipment within a real-world environment. Requires the student to complete 120 contact hours of experiential training under the guidance of an assigned clinical supervisor. Pre-requisite: BTS 200, BTS 220, and BTS 230 (each with a grade of "C" or better). Pre-requisite or Co-requisite: BTS 250, BTS 260, BTS 275, and BTS 285. Clinical: 2.0 credits (120 contact hours).
Components: Clinical
Attributes: Technical

BTS 299(0.5 - 5) **Course ID: 007241**
Selected Topics of Investigation in Biomedical Technology Systems
Includes selected topics in Biomedical Technology Systems that can be addressed to fulfill an industry need or desire. Covers topics which may vary from semester to semester at the discretion of the instructor. May repeat course with different topics to a maximum of five credit hours. Pre-requisite: Consent of instructor. Lecture/Lab: 0.5 - 5.0 credits (7.5 - 75.0 contact hours).
Components: Lecture
Attributes: Technical

CAD Computer-Aided Design

CAD 100(3) **Course ID: 000216**
Introduction to Computer Aided Design
Applies fundamental principles and capabilities of CAD, basic drafting conventions, and operations. Provides an in-depth study of computer aided drafting commands, terminology, command utilization, and skill development. Lecture: 1.0 credit (15 contact hours). Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

CAD 102(4) **Course ID: 004052**
Drafting Fundamentals
Explores the fundamentals of drafting in the use of equipment through measurement of lines, angles, circles, arcs, and irregular curves; alphabet of lines; freehand sketching; geometric constructions; orthographic projection; characteristics of lines and planes; lettering; and dimensioning techniques. Lecture/Lab: 4 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 103(4) **Course ID: 015755**
CAD Fundamentals
Provides an introduction to team and project-based study of CAD (Computer Aided Drafting) and its applications in conjunction with current computer technology. Introduces topics that includes computer hardware and software, drafting conventions and operations, file management, the Internet, e-mail, social media, CAD commands and terminology, digital security, and computer and intellectual property ethics; presents basic applications of CAD skills in 2D/3D technical drawing production, programming, systems, and interconnections with other utility software. Lecture/Lab: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Digital Literacy

CAD 108(3) **Course ID: 005186**
Introduction to Surveying
Introduces the elements of surveying including measurements, distance corrections, leveling, angles, area computation, computer calculations, topographic surveying, electronic distance measuring instruments, construction surveying, GPS, and GIS. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CAD 112(4) **Course ID: 004054**
Engineering Graphics
Explores lines and planes as they relate to orthographic projection to show the size and shape of objects, as well as for descriptive geometry in solving advanced problems. Includes application of principles and graphic elements of sectioning; techniques involved in oblique projections, axonometric projections, and perspective drawings; and dimensioning techniques and symbol usage common to all drafting disciplines. Prerequisite: CAD 102 with a grade of "C" or better or Approval of Instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 120(4) **Course ID: 004067**
Introduction to Architecture
Introduces a practical approach to architectural drafting using board and/or computer aided drafting methods as it relates to residential and commercial architecture, specifications, and structural systems including wood, masonry, concrete, and steel. Prerequisite: CAD 100 OR CAD 103 with a grade of "C" or better or approval of the Instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 130(4) Course ID: 004057
Descriptive Geometry
Examines the spatial relationships between points, lines, and planes in various orthographic projections with graphical solutions; explores the processes to solve problems using auxiliary view projection methods, revolutions, intersections, and developments. Prerequisite: CAD 112 with a grade of "C" or better or approval of Instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 150(4) Course ID: 000217
Programming in CAD
Introduces fundamental principles of the computer language(s) that represents and interfaces with the main CAD software. Includes writing subroutines and programs to perform CAD functions not available in the main CAD software. Pre-requisite: CAD 100 OR CAD 103 with a grade of "C" or better or approval of the Instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CAD 200(4) Course ID: 000218
Intermediate Computer Aided Drafting
Produce advanced two- and three-dimensional object drawings with CAD software to learn the techniques of drafting, layering, and symbols associated with one or more design applications, and calculate perimeters, areas, and mass associated with the drawings. Pre-requisite: CAD 100 OR CAD 103 with a grade of "C" or better or approval of the Instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 201(4) Course ID: 000219
Parametric Modeling
Introduces parametric modeling and design of a CAD workstation in exploring the techniques associated with drafting and design using parametric modeling software. Introduces creation of parametric models and explores associative function and flexibility of concurrent part design. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 212(4) Course ID: 004059
Industrial Drafting Processes
Explores weldment design, welding symbols, welding processes, and fabrication techniques, tool and die, and jig and fixture drawings. Includes design specifications, pattern drawings, casting, forming processes, and mechanical drawing principles in relation to the manufacturing industry. Covers screw-thread design and related fastening concepts as they relate to manufactured items and construction. Pre-requisite: CAD 100 OR CAD 103 with a grade of "C" or better or approval of the Instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 216(4) Course ID: 016429
Building Information Modeling
Introduces Building Information Modeling (BIM), an intelligent model-based process that provides insight to help plan, design, construct, manage buildings and infrastructure through three dimensional models, and generate construction drawing sheet sets. Creates structures for analytical purposes such as visualization, quality take off, cost estimating, scheduling, coordination and facility management across various fields, including architectural, structural and mechanical, electrical, and plumbing. Using BIM technology enables discovery of potential conflicts between these fields. Lecture/Lab: 4 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 220(4) Course ID: 004068
Architectural Design
Applies the theory of architectural design and presentation techniques. Deals with site selection, use of materials in design, spatial relationships, and aesthetics. Explores traditional and contemporary design, designers, processes, and historical milestones. Uses board and computer techniques to illustrate interiors and exteriors of student designs. Prerequisite: CAD 120 with a grade of "C" or better or approval of Instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 222(4) Course ID: 004061
Mechanical Design
Explores the design principles, mechanical adaptation, and drawing practices involved in the development of mechanical working drawings and the design principles in various manufacturing disciplines; gear drawing and design, and cam and follower drawing and design; mechanical assemblies, machine design, power transmission, bearings, and seals in assemblies. Involves shop processes in these mechanical designs. Pre-requisite: CAD 100 with a grade of "C" or better or approval of Instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 230(4) Course ID: 003996
Construction Techniques
Covers the elements for constructing standard residential and commercial structures; essentials of standard construction details, which illustrate the various construction methods involved in wood frame, solid masonry, masonry veneer, concrete, and steel construction. Includes the development of a portfolio for these techniques. Prerequisite: CAD 120 with a grade of "C" or better or approval of Instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 240(4) Course ID: 004008
Advanced Dimensioning and Measurement
Presents an in-depth study of advanced industrial dimensioning principles, tolerances, fits, and A.N.S.I. standards. Explores shape and geometric characteristics of parts through geometric dimensioning and tolerancing through drawing application and study. Prerequisite: CAD 100 with a grade of "C" or better or approval of the Instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 252(4) Course ID: 004070
Commercial Detailing
Explores commercial drafting building codes, building structure, materials, and structural drawing and detailing. Emphasizes calculations to determine appropriate structural members. Prerequisite: CAD 120 with a grade of "C" or better or Approval of the Instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 262(4) Course ID: 005185
Working Drawings
Prepare a set of working drawings to be used in a portfolio that shows mastery of the architectural drawing processes and knowledge of building construction techniques. Prerequisite: CAD 120 with a grade of "C" or better or approval of the Instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 291(2) Course ID: 004063
Special Problems
Allows the student to gain intermediate experience in their perspective fields through projects and tasks assigned by the instructor based on applications the student may one day experience as a professional. Sets the foundation for more in-depth projects that will be included in the student's future portfolio. Focuses on various assignments and curriculum determined by the program instructor. Prerequisite: Permission of the Instructor. Lab: 2.0 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

CAD 292(4) Course ID: 005188 Department Consent Required
Industrial Applications
Emphasizes the development of a portfolio of mechanical drawings specific to the occupational opportunities in specific geographical locations. Focuses on various assignments and curriculum as determined by the program instructor. Prerequisite: Approval of instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 293(1 - 4) Course ID: 004064 Department Consent Required
Special Problems
Allows the student to gain intermediate experience in their perspective fields through projects and tasks assigned by the instructor and based on applications the student may one day experience as a professional. Sets the foundation for more in-depth projects that will be included in the student's future portfolio. Focuses on various assignments and curriculum as determined by the program instructor. Prerequisite: Approval of Program Coordinator. Lab: 1.0 - 4.0 credits (30-120 contact hours).
Components: Laboratory
Attributes: Technical

CAD 298(1 - 3) Course ID: 004065 Department Consent Required
Practicum
Provides supervised work experiences related to the student's educational objectives. Students participating in the Practicum do not receive compensation. Prerequisite: Approval of Program Coordinator. Practicum: 1.0-3.0 credits (45-135 contact hours).
Components: Practicum
Attributes: Technical

CAD 299(1 - 3) Course ID: 004066 Department Consent Required
Cooperative Education
Provides supervised on-the-job work experience related to the student's educational objectives. Students participating in the Co-op Education program receive compensation for their work. Prerequisite: Approval of Program Coordinator. Co-op: 1.0-3.0 credits (45-135 contact hours).
Components: Co-Op
Attributes: Technical

CAR Construction/Carpentry

CAR 126(3) Course ID: 001152
Intro to Construction
Provides a discussion of the different employment opportunities of carpentry related careers within the construction industry including different construction systems and methods as well as basic management of a construction project. Emphasizes the different building materials and the correct use of hand and power tools. Includes shop and job-site safety. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CAR 127(1) Course ID: 001153
Intro to Construction - Lab
Permits students to research different employment opportunities of carpentry-related careers. Introduces the student to different construction systems and methods as well as practice basic management methods of a construction project. Permits student to become familiar with common building materials and the correct use of hand and power tools. Implements shop and job-site safety standards. Corequisite: CAR 126. Laboratory: 1 credit (30 contact hours).
Components: Laboratory
Attributes: Technical

CAR 140(3) **Course ID: 001154**
Surveying & Foundations
Enables the student to become familiar with construction surveying methods, site layout procedures and materials used in the construction of foundation systems as well as discussion on the use of the builders level, transit and laser levels. Covers the characteristics of concrete, excavation procedures, forming methods and material estimating. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CAR 141(2) **Course ID: 001155**
Surveying & Foundations-Lab
Familiarizes the student with construction surveying methods, site layout procedures and materials used in the construction of foundation systems as well as the application of the builders level, transit and laser levels. Covers the application of concrete procedures, excavation procedures, forming methods and material estimating. Corequisite: CAR 140. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

CAR 150(3) **Course ID: 001156**
Concrete Formwork
Introduces the carpentry student to heavy and commercial concrete form construction methods. Covers information about properties of concrete as a building material, rigging, concrete wall form systems, above grade floor systems, vertical piers and column form systems, on grade curb forms, horizontal beam forms, fire proofing encasement forms, stair forms, bridge and deck forms. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CAR 151(2) **Course ID: 001157**
Concrete Formwork-Lab
Introduces the carpentry student to heavy and commercial concrete form construction methods. Provides for the application of information about the properties of concrete, rigging, concrete wall form systems, above grade floor systems, vertical piers and column form systems, on grade curb forms, horizontal beam forms, fire proofing encasement forms, bridge and deck forms. Familiarizes student with OSHA construction standards on Concrete and Shoring, and Excavations. Corequisite: CAR 150. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

CAR 190(3) **Course ID: 001158**
Light Frame Construction I
Emphasizes methods of floor, wall and stair framing, layout and construction. Provides discussion of industry safety standards and building codes. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CAR 191(2) **Course ID: 001159**
Light Frame Const. I-Lab
Permits the student to practice floor, wall, and stair framing layout and construction techniques including the implementation of building codes and industry safety standards during lab or job-site practice. Corequisite: CAR 190. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

CAR 196(3) **Course ID: 001160**
Light Frame Construction II
Covers basic roof design and combination roof designs used in the construction industry including the layout and installation practices that will be used to fabricate and install ceiling and roof framing systems. Provides discussion of job-site safety practice, scaffold and ladder safety that deals with roof construction, and building code requirements for roof construction and material estimating. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CAR 197(2) **Course ID: 001161**
Light Frame Const. II-Lab
Covers basic roof design and construction methods used in the construction industry including layout, cut and install ceiling joists, rafters, and roof decking materials. Includes layout and installation practices for roof truss systems, job-site safety practice, scaffold and ladder safety that deals with roof construction and building code requirements for roof construction and material estimating. Corequisite: CAR 196. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

CAR 198(1 - 6) **Course ID: 005344**
Instructor Consent Required
Special Topics in Carpentry
Includes various Construction Carpentry Technology topics, issues and trends. Topics may vary semester to semester at the discretion of the instructor; course may be repeated with different topics to a maximum of six credit hours. Prerequisite: Consent of Instructor. Lecture: 1-6 credits (15-90 contact hours). Laboratory: 1-6 credits (30-180 contact hours).
Components: Lecture
Attributes: Technical

CAR 199(2 - 4) **Course ID: 016145**
Co-op in Construction I
Refines the techniques and skills taught in the previous carpentry courses. Provides a supervised on-the-job experience related to the student's educational and career training objectives. Pre-requisite: ISX 100 and/or permission of instructor. Co-Op: 2.0-4.0 credits (150-300 contact hours).
Components: Co-Op
Attributes: Technical

CAR 200(3) **Course ID: 001162**
Light Frame Construction III
Presents the concepts of interior and exterior finish materials and methods of installation. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CAR 201(2) **Course ID: 001163**
Light Frame Const. III-Lab
Provides an opportunity for students to perform basic applications of the concepts of interior and exterior finish methods for light frame construction. Corequisite: CAR 200. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Course Also Offered in Modules, Technical

CAR 240(3) **Course ID: 001164**
Light Frame Construction IV
Covers the concepts that support the planning, construction and installation methods for kitchen and bath cabinetry and countertops. Provides discussion of special finish trim techniques including finish stair construction and specialty millwork. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CAR 241(2) **Course ID: 001165**
Light Frame Const. IV-Lab
Allows the student to practice the concepts that support the planning, construction and installation methods for kitchen and bath cabinetry and countertops including special finish trim techniques of finish stair construction and specialty millwork. Corequisite: CAR 240. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

CAR 270(3) **Course ID: 007299**
Green Building
Integrates principles of green building technologies and methods of sustainable construction. Emphasizes green materials used in the construction of buildings along with alternative and/or renewable energy systems. Introduces Leadership in Energy and Environmental Design (LEED) and the National Green Building Standard (NGBS) rating systems for the certification process of green buildings. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CAR 298(2) **Course ID: 001166**
Practicum in Construction
Refines the techniques and skills taught in the previous carpentry courses. Provides supervised on-the-job experience related to the students educational and career training objectives. Practicum can be performed on the college campus with work assignments supervised by your program coordinator. Consists of a minimum of 150 contact hours. Two credit hours will be granted after completion. Students participating in the Practicum do not receive compensation as in the co-op program. Prerequisite: ISX 100 and/or Permission from program Instructor. Practicum: 2 credits (150 contact hours).
Components: Practicum
Attributes: Technical

CAR 299(2) **Course ID: 001167**
Co-op in Construction
Refines the techniques and skills taught in the previous carpentry courses. Provides a supervised on-the-job experience related to the students educational and career training objectives. The program will consist of a minimum of 150 contact hours. 2.0 credit hours will be granted after completion. Prerequisite: ISX 100 and/or permission from program Instructor. Co-op: 2 credits (150 contact hours).
Components: Co-Op
Attributes: Technical

CAR 2001(1) **Course ID: 016152**
Light Frame Construction III - Interior
Presents the concepts of interior finish materials and methods of installation. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CAR 2002(1) **Course ID: 016153**
Light Frame Construction III - Exterior
Presents the concepts of exterior finish materials and methods of installation. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CAR 2003(1) **Course ID: 016154**
Light Frame Construction III - Scheduling
Presents the concepts of interior and exterior finish materials and methods of installation. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CAR 2011(1) **Course ID: 016155**
Light Frame Construction III Lab Interior
Provides an opportunity for students to perform basic applications of the concepts of interior finish methods for light frame construction. Co-requisite: CAR 2001, Pre-requisite OR Co-requisite: CAR 2001. Laboratory: 1.0 credits (30 contact hours).
Components: Laboratory

CAR 2012(1) **Course ID: 016156**
Light Frame Construction III Lab Exterior
Provides an opportunity for students to perform basic applications of the concepts of exterior finish methods for light frame construction. Co-requisite: CAR 2002, Pre-requisite OR Co-requisite: CAR 2002. Laboratory: 1.0 credits (30 contact hours).
Components: Laboratory

CDH Community Dental Health

CDH 110(3) **Course ID: 016830**
Dental Health Communication Skills
Provides an overview of oral health communication, oral health literacy, and patient assessment interviewing skills for the Community Dental Health Coordinator. Emphasizes impact of oral health literacy on one's health. Includes communication strategies, verbal and nonverbal communication skills. Covers motivational interviewing, human behaviors, and health concepts emphasizing oral health. Incorporates patient assessment, feedback, education, and behavior change interventions for dental patients. Pre-requisite: Must be a registered Dental Hypienist (RDH). Lecture: 3.0 credits (45 contact hours)
Components: Lecture
Attributes: Technical

CDH 115(3) **Course ID: 016831**
Dental Health Coordination, Documentation, Reporting, and Finance
Provides an overview of coordination, documentation and reporting approaches for working with families as well as individuals. Includes family assessment, case documentation and overview of the services system. Covers health care finance, the referral process and components of case management. Pre-requisite: Must be a registered Dental Hygienist (RDH) . Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CDH 125(2) **Course ID: 016832**
Dental Health Teaching and Learning Skills
Provides an overview of teaching and learning skills as they apply to the Dental Health field. Includes teaching and learning techniques, goal setting and critical thinking. Covers internet usage and safety as well as an introduction to concepts of lifelong learning. Pre-requisite: Must be a registered Dental Hygienist (RDH). Lecture: 2.0 credits (30 contact hours)
Components: Lecture
Attributes: Technical

CDH 220(3) **Course ID: 016833**
Prevention of Periodontal Disease
Covers education and procedures used in the prevention of periodontal disease. Includes soft deposits, calculus and identification of tissue changes as well as characteristics of the most common types of periodontal disease. Covers oral cancer treatment and use of sickle scalers for performing gross debridement. Presents coronal polishing. Pre-requisite: Must be a registered Dental Hygienist (RDH). Lecture: 3.0 credits (45 contact hours)
Components: Lecture
Attributes: Technical

CDH 245(3) **Course ID: 016834**
Community Dental Health Coordinator Internship
Demonstrates practical application of the Community Dental Health Coordinator (CDHC) skills in a practicum setting. Includes knowledge and skills required to organize, develop and manage integrated dental care in community-based clinics within practice standards. Pre-requisite: Must be a registered Dental Hygienist (RDH). Practicum: 6.0 hours (360 contact hours)
Components: Lecture
Attributes: Technical

CET Civil Engineering Technology

CET 150(3) **Course ID: 004703**
Civil Engineering Graphics
This course provides the opportunity for the student to learn the basic theory necessary to generate and understand typical civil engineering working drawings. The student will develop graphic communication skills using current industry standard software. Prerequisite: CAD 100 or ACH 185/195. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CET 200(3) **Course ID: 004704**
Civil Engineering Materials
The course will provide a practical look at current practice in the use of materials for civil engineering applications. Students will learn test procedures, design considerations, and overall evaluation methods for these materials. The course will include the study of soils, aggregates, concrete, and asphalt cement. Prerequisite: ACH 160. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CET 210(3) **Course ID: 004705**
Structural Analysis and Design
The course will cover building structure for civil engineering technology students, including different types of building loads and their effect upon the various materials used by architects, engineers and technologists. The students will be introduced to quality construction techniques utilizing steel, concrete and reinforced concrete. Industry manuals, specifications and computer programs will be utilized to familiarize the student with current technology. Prerequisite: ACH 225. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CET 220(4) **Course ID: 004706**
Intermediate Surveying
The course will include the application of surveying practices for route surveying for highways, construction staking, and topographic surveys. Students will perform deed research and evaluation, convert outdated deed descriptions into current measurements, and prepare record plats. Prerequisite: CE 211. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture

CET 260(3) **Course ID: 004707**
Hydrology and Drainage
Students will be introduced to the fundamentals of hydrology, including hydraulics of open and closed systems, water quality and drainage. Characteristics of pressures and flows in pipes, storm water runoff, culvert and ditch flow will be studied. Prerequisite: ACH 160, ACH 225, and PHY 211, or consent of instructor. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CET 280(3) **Course ID: 004708**
Highway Design
Students will be introduced to the fundamentals of highway design. Different components involved in designing a typical highway, including planning, surveying, mapping, and preliminary and final design will be explored using computer design software. Prerequisite: CAD 100 or ACH 185/195, MA 109, and CE 211. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CET 295(1 - 4) **Course ID: 005036**
Instructor Consent Required
Independent Problems
A problem or special project, approved by the instructor, will provide an opportunity for independent study for Civil Engineering Technology students. This course may be repeated to a maximum of six credits. Prerequisite: Consent of instructor. Lecture: Variable. Laboratory: Variable.
Components: Laboratory, Lecture
Attributes: Technical

CHE Chemistry

CHE 120(3) **Course ID: 000237**
Chemistry in Society
Introduces non-science majors to the main concepts and applications of chemistry in our society. Prerequisite: (Completion of one developmental math course above Pre-Algebra with a grade of "C" or better) OR (College level math ACT score) OR equivalent. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science, Course Also Offered in Modules

CHE 125(1) **Course ID: 006172**
Chemistry in Society Laboratory
Reinforces concepts covered in CHE 120 and introduces scientific inquiry through selected experiments. Prerequisite or corequisite: CHE 120. Laboratory: 1 credit (45 contact hours) (45:1 ratio).
Components: Laboratory
Attributes: SL - Science Laboratory

CHE 130(4) **Course ID: 000236**
Introductory General and Biological Chemistry
Presents the elementary principles of general, organic and biological chemistry. Prerequisite: (Applied Mathematics OR Intermediate Algebra or higher) with a grade of "C" or better OR (College level math ACT score). Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: SL - Science Laboratory, SN - Science

CHE 140(3) **Course ID: 000224**
Introductory General Chemistry
Introduces topics in general chemistry, including properties of matter, stoichiometry, gases, atomic structure, bonding, acids and bases, oxidation and reduction, and nuclear chemistry. Intended for students interested in a one-semester course in general chemistry and recommended for students seeking careers in allied health fields. Prerequisite: [(Intermediate Algebra) or (College Algebra or higher) with a grade of "C" or better] OR (College Level math ACT score). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

CHE 145(1) **Course ID: 000239**
Introductory General Chemistry Laboratory
Reinforces concepts covered in CHE 140 and introduces basic laboratory techniques, methods, and instrumentation through selected experiments dealing with chemical and physical properties, qualitative analysis, and quantitative analysis. Prerequisite or corequisite: CHE 140. Laboratory: 1 credit (45 contact hours, 45:1 ratio).
Components: Laboratory
Attributes: SL - Science Laboratory

CHE 150(3) **Course ID: 000226**
Introduction to Organic and Biological Chemistry
Continues the sequence begun in CHE 140. Introduces topics in organic chemistry and biochemistry. Introduces organic functional groups, their reactions, and the chemistry of proteins, nucleic acids, carbohydrates, and lipids. Prerequisite: CHE 140 with a grade of "C" or better Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SL - Science Laboratory, SN - Science

CHE 155(1) **Course ID: 006173**
Introduction to Organic and Biological Chemistry Laboratory
Reinforces concepts covered in CHE 150 and introduces basic laboratory techniques, methods, and instrumentation through selected experiments dealing with the preparation, characterization, and purification of organic compounds and the reactions of biomolecules. Prerequisite: CHE 140 and CHE 145. Prerequisite or corequisite: CHE 150. Laboratory: 1 credit (45 contact hours, 45:1 ratio).
Components: Laboratory
Attributes: SL - Science Laboratory

CHE 160(2) **Course ID: 000238**
Preparation for General College Chemistry
Prepares students for success in CHE 170. Introduces vocabulary and nomenclature and provides students with practice in dimensional analysis, stoichiometry, and other critical skills. Offered on a Pass/Fail basis only. Prerequisite: (Math ACT 19) OR (Intermediate Algebra with a grade of "C" or better). Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Other

CHE 170(4) **Course ID: 000225**
General College Chemistry I
Focuses on major chemical topics, including stoichiometry, atomic structure, properties of matter and the relationship between molecular structure and chemical behavior. Emphasizes solving of mathematical problems which illustrate the principles of chemistry. Designed for students in the sciences, engineering, and pre-professional programs. Prerequisite: (ACT math score of 21) OR (College Algebra or higher with "C" or better) OR (CHE 130 OR CHE 140 with a grade of "C" or better) OR (CHE 160 with a grade of "P") OR (Appropriate score on math on chemistry placement exam.). Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: SN - Science

CHE 175(1) **Course ID: 000240**
General College Chemistry Laboratory I
Reinforces concepts covered in CHE 170 and introduces basic laboratory techniques, methods, and instrumentation through selected experiments. Emphasizes both quantitative and qualitative techniques. Prerequisite or corequisite: CHE 170. Laboratory: 1 credit (45 contact hours, 45:1 ratio).
Components: Laboratory
Attributes: SL - Science Laboratory, SN - Science

CHE 180(4) **Course ID: 000227**
General College Chemistry II
Continues CHE 170. Focuses on major chemical topics, including acid-base chemistry, kinetics, thermodynamics, and chemical equilibrium. Emphasizes solving of mathematical problems which illustrate the principles of chemistry. Designed for students in the sciences, engineering, and pre-professional programs. Prerequisite: (CHE 170 with a grade of "C" or better) and (College Algebra or higher with "C" or better). Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: SN - Science

CHE 185(1) **Course ID: 000241**
General College Chemistry Laboratory II
Reinforces concepts covered in CHE 180 and introduces basic laboratory techniques, methods, and instrumentation through selected experiments. Emphasizes both quantitative and qualitative techniques. Prerequisite: CHE 175 with a grade of "C" or better. Prerequisite or corequisite: CHE 180. Laboratory: 1 credit (45 contact hours, 45:1 ratio).
Components: Laboratory
Attributes: SL - Science Laboratory

CHE 190(3) **Course ID: 006802**
Industrial Chemistry
Introduces topics in basic chemical engineering and chemical processing. Includes organic chemistry, synthetic polymers, energy sources, diffusion, fluid flow, heat transfer, recycling, air and water pollution. Intended for students in the chemical engineering technology program. Pre-requisite: (CHE 140 and CHE 145) or consent of instructor. Co-requisite: CHE 195. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

CHE 195(1) **Course ID: 006803**
Industrial Chemistry Laboratory
Reinforces concepts covered in CHE 190. Includes basic laboratory techniques, methods, and selected experiments dealing with chemical engineering technology. Pre-requisite: (CHE 140 and CHE 145) or consent of instructor. Co-requisite: CHE 190. Lab: 1.0 credit hour (45 contact hours).
Components: Laboratory
Attributes: Other

CHE 253(3) **Course ID: 006580**
Materials Science
The properties of materials as reflected by the atomic and electronic structure of their constituent elements. Mechanical, thermal, electrical, magnetic, optical, and chemical characteristics of metallic, ceramic, polymeric, and composite solids. Pre-requisites: CHE 180. Lecture: 3.0 (45 contact hours).
Components: Lecture
Attributes: University Course (University of Louisville)

CHE 270(3) **Course ID: 000230**
Organic Chemistry I
Presents the fundamental principles of organic chemistry. Emphasizes the structures and properties of carbon-containing compounds. Introduces organic reactions, their mechanisms, and applications to synthesis. Prerequisite: CHE 180 with a grade of "C" or better. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

CHE 275(2) **Course ID: 000231**
Organic Chemistry Laboratory I
Introduces common techniques used in the laboratory for purification, separation, identification, and reactions of organic compounds. Prerequisite: CHE 185 with a grade of "C" or better. Prerequisite or corequisite: CHE 270. Laboratory: 2 credit (60 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory

CHE 280(3) **Course ID: 000232**
Organic Chemistry II
Presents further applications of the principles of organic chemistry. Continues the study of organic reactions, their mechanisms, synthesis and modern spectroscopic techniques. Prerequisite: CHE 270 with a grade of "C" or better. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

CHE 285(2) **Course ID: 000233**
Organic Chemistry Laboratory II
Explores the synthesis, purification, and characterization of organic compounds in the laboratory. Prerequisite: CHE 275 with a grade of "C" or better. Prerequisite or corequisite: CHE 280. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory

CHE 290(1 - 3) **Course ID: 006175**
Instructor Consent Required
Selected Topics in Chemistry: (Topic)
Presents a topic in chemistry chosen by the instructor. Topics may vary from semester to semester at the discretion of the instructor; course may be repeated with different topics to a maximum of six credit hours. Prerequisite: Consent of instructor. Lecture: 1-3 credits (15-45 contact hours).
Components: Lecture

CHE 295(1 - 3) **Course ID: 006176**
Instructor Consent Required
Selected Topics in Chemistry Laboratory: (Topic)
Explores experiments pertinent to a topic in chemistry chosen by the instructor. Topics may vary from semester to semester at the discretion of the instructor; course may be repeated with different topics to a maximum of six credit hours. Prerequisite: Consent of instructor. Laboratory: 1-3 credits (30-90 contact hours).
Components: Laboratory

CHE 299(1 - 3) **Course ID: 006177**
Instructor Consent Required
Laboratory Research in Chemistry: (Topic)
Offers the student the opportunity to perform laboratory research on a problem chosen by the instructor. Course may be repeated to a maximum of six credit hours. Prerequisite: Consent of instructor. Laboratory: 1-3 credits (30-90 contact hours).
Components: Laboratory

CHE 1201(0.75) **Course ID: 006126**
Fundamentals
Introduces non-science majors to the fundamentals and applications of chemistry in our society. Prereqisite: (Completion of one developmental math course above Pre-Algebra with a grade of "C" or better) OR (College level math ACT score) OR equivalent. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

CHE 1202(0.75) **Course ID: 006127**
Intro to Organic & Biochem
Introduces non-science majors to the fundamentals and applications of organic and biochemistry in society. Prerequisite: CHE 1201. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

CHE 1203(0.75) **Course ID: 006128**
Selected Topics in Chemistry and Culture
Introduces non-science majors to selected topics in chemistry and culture. Prerequisite: CHE 1201 or 1202. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

CHE 1204(0.75) **Course ID: 006129**
Special Topics: Fields of Chemistry
Introduces non-science majors to different fields in chemistry through applied special topics. Prerequisites: CHE 1201, 1202, or 1203. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

CIS Computer Information Systems

CIS 230(3) **Course ID: 000264**
Advanced Microcomputer Applications
Students use advanced functions of current software packages (word processing, spreadsheets, database management, presentation developers). Topics include working with complex documents, spreadsheets, and databases. Additionally, students will create sophisticated presentations and prepare data for distribution on the Web. Lecture: 3 hours. Prerequisite: CIS 130 or consent of instructor.
Components: Lecture
Course Equivalents: CIT 234
Attributes: Course Also Offered in Modules, Technical

CIS 2301(0.9) **Course ID: 005848**
Word Processing Level 3
Uses advanced functions of word processing. Includes working with complex documents and creating and preparing data for distribution on the Web. Prerequisite: (CIS 130 or CIS 1301) or consent of instructor. Lecture: 0.9 credit (13.5 contact hours).
Components: Lecture

CIS 2302(0.9) **Course ID: 005849**
Spreadsheets Level 3
Uses advanced functions of spreadsheets. Includes working with complex spreadsheets and the creation and preparation of data for distribution on the Web. Prerequisite: : (CIS 130 or CIS 1302) or consent of instructor. Lecture: 0.9 credits (13.5 contact hours).
Components: Lecture

CIS 2303(0.9) **Course ID: 005850**
Databases Level 3
Uses advanced functions of databases. Includes working with complex databases and the creation and preparation of data for distribution on the Web. Prerequisite: (CIS 130 or CIS 1303) or consent of instructor. Lecture: 0.9 credit (13.5 contact hours).
Components: Lecture

CIS 2304(0.3) **Course ID: 005851**
Presentation Software Level 3
Uses advanced functions of presentation software. Includes working with complex presentations and the creation and preparation of data for distribution on the Web. Prerequisite:(CIS 130 or CIS 1304) or consent of instructor. Lecture: 0.3 credit (4.5 contact hours).
Components: Lecture

CIT Computer Information Technology

CIT 90(3) **Course ID: 007435**
Fundamental Computer Skills
Introduces computer skills fundamental to college success. Focuses on computer terminology; rudimentary skills in touch typing; creating simple documents, slide shows and spreadsheets; using a course management system; using a search engine to find information on the Internet; initializing and using student email and online student services. This course does not fulfill the Digital Literacy requirement. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 105(3) **Course ID: 004710**
Introduction to Computers
Provides an introduction to the computer and the convergence of technology as used in today's global environment. Introduces topics including computer hardware and software, file management, the Internet, e-mail, the social web, green computing, security and computer ethics. Presents basic use of application, programming, systems, and utility software. Basic keyboarding skills are strongly recommended. Pre-requisite: RDG 20 or Consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Digital Literacy, Course Also Offered in Modules

CIT 111(4) **Course ID: 006189**
Computer Hardware and Software
Presents a practical view of computer hardware and client operating systems. Covers computer hardware components; troubleshooting, repair, and maintenance; operating system interfaces and management tools; networking components; computer security; and operational procedures. Prerequisite: (CIT 105 AND MAT 065) OR Consent of Instructor. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 119(4) **Course ID: 016516**
Computer Science I
Introduces students to the discipline of computer science and programming. Covers algorithm development, data representation, logical expressions, sub-programs and input/output operations using a high-level programming language. Includes intensive lab work outside of class time. Pre-requisite: MTH 126 or permission of instructor. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: Technical

CIT 120(3) **Course ID: 004712**
Computational Thinking
Promotes understanding of computer programming and logic by teaching students to think like a computer. Covers skills needed to develop and design language-independent solutions to solve computer-related problems. Covers development and design basics including use of variables, control and data structures, and principles of command-line and object-oriented languages. Prerequisite: (CIT 105 OR OST 105 OR IMD 100) AND (MAT 085 OR MAT 126) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 124(3) **Course ID: 016259**
Introduction to Game Development
Presents an overview of the game development process including game development history, platforms, goals, genres, players, story and character development, gameplay, levels, interfaces, audio, development processes, development team roles, marketing, and maintenance. Offers students the opportunity to play and analyze games facilitating discussion on game design and function. Completion of partial game design will occur. Pre-requisite: CIT105 OR IMD100 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours)
Components: Lecture
Course Equivalents: IMD 124
Attributes: Technical

CIT 125(3) **Course ID: 006901**
Intro to Digital Maps
Provides basic theories and concepts of geographical information systems including basic GIS capabilities, data analysis, data types, coordinate systems, cartography and mapping concepts. Introduces GIS software using industry-specific applications and technology to provide a conceptual base to build expertise in GIS. Pre-requisite: CIT 105 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 130(3) **Course ID: 004713**
Productivity Software
Utilizes current word processing, spreadsheet, database, and presentation application software to solve common business problems. Covers basic features of each software application. Prerequisite: CIT 105 OR OST 105 OR IMD 100 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 140(3) **Course ID: 004714**
JavaScript I
Provides students with an overview of the JavaScript scripting language. Includes coding, testing, and debugging JavaScript programs; using variables, operators, and data types; creating dynamic web pages using JavaScript; controlling the behavior of forms, buttons, and text elements; and using control structures, pattern matching, objects, and application scripts. Prerequisite: CIT 120 AND (CIT 150 or CIT 155) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 141(3) **Course ID: 005037**
PHP I
Explores the fundamentals of PHP, with emphasis on syntax, structure, and current usage. Includes dynamic generation of web pages, fluid forms, and web security. Prerequisite: CIT 120 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 142(3) **Course ID: 006902**
C++ I
Introduces students to fundamental programming concepts using the C++ programming language. Includes data types, control structures, simple data structures, error-handling, modular programming, and information and file processing. Pre-requisite: CIT 120 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 143(3) **Course ID: 006247**
C# I
Introduces students to fundamental programming concepts using the C# programming language. Includes data types, control structures, simple data structures, error-handling, object-oriented programming, graphical user interfaces, and modular programming. Prerequisite: CIT 120. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 144(3) **Course ID: 006190**
Python I
Introduces students to fundamental programming concepts using the Python programming language. Includes data types, control structures, simple data structures, error-handling, modular programming, object-oriented programming, graphical user interfaces and file processing. Prerequisite: CIT 120 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 145(3) **Course ID: 004715**
Perl I
Provides students with an overview of the PERL scripting language. Includes coding, testing, and debugging PERL programs; using variables, operators, and data types; and using control structures, pattern matching, objects, and application scripts. Prerequisite: CIT 120 OR Consent of the Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

CIT 147(3) **Course ID: 006903**
Programming I: Language
Introduces students to fundamental programming concepts using an industry-specific or emerging programming language. Includes data types, control structures, simple data structures, error-handling, modular programming, information and file processing, and uniqueness of the language used in the course. Pre-requisite: CIT 120 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 148(3) **Course ID: 004716**
Visual Basic I
Introduces students to fundamental programming concepts using the Visual Basic programming language. Includes data types, control structures, simple data structures, error-handling, modular programming, event-driven programming, graphical user interfaces, and file processing. Prerequisite: CIT 120 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 149(3) **Course ID: 004717**
Java I
Introduces students to fundamental programming concepts using the Java programming language. Includes data types, control structures, simple data structures, error-handling, object-oriented programming, graphical user interfaces, and modular programming. Prerequisite: CIT 120 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 150(3) **Course ID: 004718**
Internet Technologies
Provides students with a study of traditional and emerging Internet technologies. Covers topics including Internet fundamentals, Internet applications, Internet delivery systems, and Internet client/server computing. Provides a hands-on experience and some rudimentary programming in an Internet environment. Prerequisite: (CIT 105 AND CIT 120) OR Consent of the Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 151(3) **Course ID: 007390**
Social Media I
Introduces students to the study of social media. Covers topics including the uses, basic tools, and impact of social media upon society. Examines the benefits for business to leverage the use of social media as well as employing social media policy. Pre-requisite: Digital Literacy or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 152(3) **Course ID: 007391**
Social Media Tools and Technologies
Introduces students to web-based social media tools. Explores and researches online applications, social networks, and web branding. Develops skills to leverage social media applications and niche markets to increase business presence. Pre-requisite: CIT 150 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Laboratory
Attributes: Technical

CIT 155(3) **Course ID: 006904**
Web Page Development
Introduces web page design through the use of HTML and CSS. Uses text and/or web editors to create web documents with various formats and page layouts, multimedia, tables and forms. Emphasizes W3C web design and accessibility standards. Pre-requisite: CIT 105 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 157(3) **Course ID: 006905**
Web Site Design and Production
Introduces web site production processes with particular emphasis on design involving layout, navigation, interactivity, and using web production software. Pre-requisite: CIT 105 OR Consent of Instructor. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

CIT 160(4) **Course ID: 004719**
Intro to Networking Concepts
Introduces technical level concepts of non-vendor specific networking including technologies, media, topologies, devices, management tools, and security. Provides the basics of how to manage, maintain, troubleshoot, install, operate, and configure basic network infrastructure. Pre-requisite: MAT 65 OR Consent of Instructor. Pre-requisite Or Co-requisite: CIT 111 OR Consent of Instructor Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 161(4) **Course ID: 006906**
Introduction to Networks
Introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. Introduces the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations. Helps students to be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. Pre-requisite: MT 065 OR Consent of Instructor. Pre-requisite or Co-requisite: CIT 111 OR Consent of Instructor. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 167(4) **Course ID: 015644**
Routing & Switching Essentials
Covers the architecture, components, and operations of routers and switches in a small network. Helps students learn how to configure a router and a switch for basic functionality. Helps students configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPv2, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks. Pre-requisite: CIT 161 or Consent of Instructor. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

CIT 170(3) **Course ID: 004720**
Database Design Fundamentals
Provides an overview of database and database management system concepts, internal design models, normalization, network data models, development tools, and applications. Prerequisite: (CIT 105 OR OST 105 OR IMD 100) AND (MAT 085 OR MAT 126) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 171(3) **Course ID: 004721**
SQL I
Provides students with an extensive introduction to database manipulation techniques. Introduces students to SQL; will create and maintain database objects; and store, retrieve, and manipulate data using SQL. Prerequisite: (CIT 120 and CIT 170) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 180(3) **Course ID: 006191**
Security Fundamentals
Introduces basic computer and network security concepts and methodologies. Covers principles of security; compliance and operational security; threats and vulnerabilities; network security; application, data, and host security; access control and identity management; and cryptography. Helps to prepare students for the COMPTIA Security+ examination. Prerequisite: (CIT 105 AND (CIT 160 OR CIT 161)); OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 182(3) **Course ID: 006911**
Perimeter Defense
Presents information and skills required to secure computers and networks from attacks with an emphasis on configuration of firewalls and intrusion-detection systems. Pre-requisite: CIT 180 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 184(3) **Course ID: 006912**
Attacks and Exploits
Provides knowledge and skills necessary to understand a variety of attacks and exploits against computers and networks. Teaches effective defensive techniques against real attacks. Pre-requisite: CIT 180 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 201(3) **Course ID: 007295**
Information Storage Management
Provides a comprehensive introduction to storage technology. Explores the architectures, features, and benefits of intelligent storage systems, networked storage technologies, long-term archiving solutions, information security, and the emerging field of storage virtualization and cloud technologies. Pre-requisite: (CIT 167 and (CIT 214 or CIT 217) or consent of instructor Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

CIT 203(3) **Course ID: 007296**
Introduction to Virtualization
Provides an introduction to virtualization technologies including the architecture, its applications, and best practices. Utilizes VMware ESXi servers and VMware vCenter servers for creation and management of virtual machines, virtual switches and storage architectures including distributed resource scheduling, high availability, and fault tolerance. Satisfies the requirements for the vSphere Foundations exam and the VMware Certified Associate Data Center Virtualization (VCA-DCV). Pre-requisite:(CIT 167 and (CIT 214 or CIT 217) or consent of instructor. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

CIT 204(3) **Course ID: 016721**
VMware Optimize and Scale
Provides advanced skills for configuring and maintaining a highly available and scalable virtualization infrastructure. Utilizes techniques to optimize resources in a virtualized data center to support infrastructure as a service (IaaS) architectures. Satisfies the VMware Certified Professional/ Data Center Virtualization (VCP-DCV) course requirement. Pre-requisite: CIT 203 or Consent of Instructor. Lecture/ Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

CIT 205(3) **Course ID: 007297**
Cloud Infrastructure and Services
Provides a comprehensive introduction to cloud computing deployment and service models, cloud infrastructure, and the key considerations in migrating to cloud computing. Examines the required technology essentials across all domains including server, storage, networking, applications, and databases to help develop a strong understanding of virtualization and cloud computing technologies. Pre-requisite: (CIT 201 and CIT 203) or consent of instructor. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

CIT 209(4) **Course ID: 015645**
Scaling Networks
Covers the architecture, components, and operations of routers and switches in a larger and more complex network. Helps students learn how to configure routers and switches for advanced functionality. Helps students to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, STP, and VTP in both IPv4 and IPv6 networks. Helps students to develop the knowledge and skills needed to implement DHCP and DNS operations in a network. Pre-requisite: CIT 167 or Consent of instructor. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

CIT 212(4) **Course ID: 004723**
Connecting Networks
Covers WAN technologies and network services required by converged applications in a complex network. Enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Helps students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. Helps students to develop the knowledge and skills needed to implement IPSec and virtual private network (VPN) operations in a complex network. Prerequisite: CIT 209 OR Consent of Instructor. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Course Equivalents: CIT 283
Attributes: Technical

CIT 213(3) **Course ID: 006192**
Microsoft Client Configuration
Covers installation and configuration of the current Microsoft Windows client operating system. Helps prepare students for exams in the Microsoft certification exam series. Prerequisite: (CIT 111 AND (CIT 160 OR CIT 161)) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 214(3) **Course ID: 006914**
Microsoft Server Configuration
Provides students with the knowledge and skills to install, configure and administer a network server infrastructure including DNS, DHCP, Hyper-V, including the design and implementation of an Active Directory environment. Covers how to implement and configure secure network access, implement fault tolerant storage technologies, enable network technologies most commonly used with Windows Servers and IP-enabled networks, configure an Active Directory environment, and work with virtual drives and devices. Assists in prepping students for various Microsoft certification exam series. Pre-requisite: (CIT 111 AND (CIT 160 OR CIT 161)) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 215(3) **Course ID: 015661**
Microsoft Server Administration
Covers the skills needed to maintain and administer a Windows Server 2012 environment, including user and group management, network access, and data security at an intermediate level. Helps prepare students to implement a core Windows Server infrastructure in an enterprise environment (second in a series of three courses). Pre-requisite: CIT 214. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 216(3) **Course ID: 015648**
Microsoft Server Advanced Services
Covers the advanced configuration tasks necessary to deploy, manage and maintain a Windows Server environment, including fault tolerance, certificate services, and identity federation. Helps prepare students to implement a core Windows Server 2012 infrastructure in an enterprise environment (third in a series of three courses). Pre-requisite: CIT 214. Lecture: 3.0 credits (45 contact hours)
Components: Lecture
Attributes: Technical

CIT 217(3) **Course ID: 004724**
UNIX/Linux Administration
Developed in 1969, the UNIX operating system shaped the development of the Internet and is still used extensively in servers, workstations, and mobile devices. Learn the fundamental skills necessary to install UNIX/Linux and maintain a UNIX/Linux system on a day-to-day basis. Prerequisite: (CIT 111 AND CIT 160) OR Consent of Instructor. Lecture/Lab: 3.0 credits (60 contact hours)
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 218(3) **Course ID: 004725**
UNIX/Linux Net Infrastructure
Establishing secure networking environments is a key strength of the UNIX/Linux operating system. Explores naming, messaging, file transfer, remote login, routing, address assignment, distributed file systems, web, and email services in a standard UNIX/Linux server environment. Prerequisite: CIT 217 OR Consent of Instructor. Lecture/Lab: 3.0 credits (60 contact hours)
Components: Lecture
Attributes: Technical

CIT 219(3) **Course ID: 006915**
Internet Protocols
Provides an in-depth exploration of the components of the TCP/IP protocol suite and the associated underlying technologies required to support them. Includes design, installation, configuration, management, and troubleshooting of TCP/IP networks. Pre-requisite: (CIT 160 OR CIT 161OR CIT162) OR Consent of Instructor. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Course Equivalents: CIT 269
Attributes: Technical

CIT 221(3) **Course ID: 006916**
Computer Graphics
Introduces basic computer graphics with an emphasis on graphics for game design. Instructs students in practical aspects of graphics such as color, ray tracing, rasterization, shading, mapping, light, and shadow. Pre-requisite: CIT105 OR IMD100 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Course Equivalents: IMD 221
Attributes: Technical

CIT 222(3) **Course ID: 016260**
3D Modeling for Video Games
Instructs students in the use of industry-standard 3D modeling software specific to the video-game industry. Emphasizes both architectural and character modeling. Familiarizes the student with key 3D modeling concepts and methods, workflow, and the creation and preparation of 3D assets for use specifically in a video-game application. Allows students to create a variety of 3D assets. Pre-requisite: CIT/IMD 221 OR Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: IMD 222
Attributes: Technical

CIT 223(3) **Course ID: 006917**
3D Animation for Video Games
Exposes students to the specialized process of animating 3D assets for gaming applications. Familiarizes students with animating both organic and inorganic assets, lighting scenes, rendering and producing cut-scenes, and preparing character assets for in-game motion. Allows students to acquire the necessary skills and techniques to integrate audio with their animations using basic sound-engineering software and processes. Pre-requisite: CIT/IMD 222 AND CIT/IMD 272 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Course Equivalents: IMD 223
Attributes: Technical

CIT 225(3) **Course ID: 006918**
GIS Data Analysis
Explores Geographical Information System extensions. Introduces and identifies popular advanced extensions used for image analysis, spatial analysis, and 3D analysis. Collection and analysis of field data utilizing GPS devices and data collection applications. Pre-requisite: CIT 125 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 229(3) **Course ID: 006919**
Selected Topics in GIS
Explores selected topics in Geographical Information Systems such as homeland security, agriculture, government applications, remote sensing, spatial modeling, GPS techniques, or cartography. (Course may be repeated with different topics to a maximum of six credit hours.) Pre-requisite: CIT 125 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 231(3) **Course ID: 016140**
Management Information Systems
Introduces the sociotechnological aspects of information systems and their implications for organizations, as well as current topics and technologies associated with information systems. Emphasizes the Internet and e-commerce. Introduces other technologies both current and future. Ends with coverage of the combined application of sociotechnological principles and various technologies. Pre-requisite: Digital literacy of instructor permission. Lecture: 3.0 credits (Lab 45).
Components: Lecture
Attributes: Technical

CIT 232(3) **Course ID: 006193**
Help Desk Operations
Introduces a variety of tools and techniques to provide user support in help desk operations. Explores help desk concepts, customer service skills, troubleshooting problems, writing for end users, help desk operations and software, needs analysis, facilities management, and other topics related to end user support. Prerequisite: CIT 105 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 234(3) **Course ID: 004727**
Advanced Productivity Software
Uses advanced functions of word processing, presentation, and email software. Includes working with complex documents creating and preparing data distribution on the web. Prerequisite: CIT 130 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Course Equivalents: CIS 230
Attributes: Technical

CIT 236(3) **Course ID: 004728**
Adv Data Organization Software
Uses advanced functions of databases and spreadsheets. Explores complex databases and spreadsheets for the creation and preparation of data distribution on the Web. Prerequisite: CIT 130 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 238(3) **Course ID: 016862**
Android Programming I
Introduces students to fundamental Android mobile application development concepts. Prepares students to design, code, test, and publish Android mobile applications for a variety of mobile device platforms. Includes secure coding learning modules for Java and Android. Pre-requisite: CIT 149 OR INF 120. Lecture: 3.0 credits (45 contact hours)
Components: Lecture
Attributes: Technical

CIT 241(3) **Course ID: 006920**
PHP II
Explores the dynamic features of PHP and how it can interact to form spontaneous websites and dynamic feature rich content. Pre-requisite: CIT 141 OR Consent of Instructor. Lecture: 3.0 (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 242(3) **Course ID: 006921**
C++ II
Introduces students to advanced programming concepts using C++. Includes advanced data structures, concurrency, innovative algorithms, advanced file processing, and topics that are unique to C++. Pre-requisite: CIT 142 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 243(3) **Course ID: 006248**
C# II
Provides students with an extensive overview of designing and developing advanced object-oriented applications using the C# programming language. Includes advanced graphical user interfaces, event-driven programming, advanced data types and structures, concurrency, file and data base processing, mobile computing, and other advanced topics. Prerequisite: CIT 143. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 244(3) **Course ID: 015649**
Python II
Provides students with an extensive overview of designing advanced computer applications using the Python programming language. Includes graphical user interfaces, event-driven programming, modular programming, advanced object-oriented programming, advanced data types and structures, input validation, error-handling, database processing, and client/server programming. Pre-requisite: CIT 144 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 246(3) **Course ID: 006922**
2-D Game Development: Language
Provides students with an introduction to two-dimensional game creation. Includes the creation of a two-dimensional game using an industry-specific or emerging programming language. This course may be repeated with a different language. Pre-requisite: Level I Programming Language (using the same programming language) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 247(3) **Course ID: 006923**
Programming II: Language
Introduces students to advanced programming concepts using an industry-specific or emerging programming language. Includes advanced features of the language studied, such as, advanced data structures, concurrency, innovative algorithms, advanced file processing, and topics that are unique to the language studied. Pre-requisite: CIT 147 (for the same programming language) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 248(3) **Course ID: 004729**
Visual Basic II
Provides students with an extensive overview of designing advanced computer applications using the Visual Basic programming language. Includes graphical user interfaces, event-driven programming, modular programming, object- orientated programming, advanced data types and structures, input validation, error-handing, and file and database processing. Prerequisite: CIT 148 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 249(3) **Course ID: 005208**
Java II
Provides students with an extensive overview of designing and developing advanced object-oriented applications using the Java programming language. Includes input and output streams (file processing), polymorphism, inheritance, multithreading, recursion, and other advanced topics. Prerequisite: CIT 149 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 251(3) **Course ID: 007392**
Social Media II
Provides students with skills, knowledge, and experience to respond to the challenges of a rapidly changing world through the implementation of social media strategies. Examines social media plans for building social profiles, selecting appropriate audiences, and effective communication through identified social media tools. Covers additional trends, case studies, and research on the creation on utilization of web and social media technologies and practices. Pre-requisite: CIT 151 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 253(3) **Course ID: 005039**
Data Driven Web Pages: (Topic)
Provides students with the knowledge and skills to design, implement, and manage a database-driven web site. Includes the study of databases and web servers in e-commerce, transaction processing, and client-side and server-side Web scripting. Includes the creation of a database-driven Web site. Prerequisite: (CIT 150 AND CIT 170 AND Approved Level I Programming Language) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 255(3) **Course ID: 005104**
Web Server Administration
Provides an in-depth study of the functions required to run a safe and stable web server. Considers multiple web services on multiple platforms from installation to configuration, availability, and security. Requires hands-on experiences with web services. Prerequisite: (CIT150 AND (CIT214 OR CIT218) AND CIT219) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 257(3) **Course ID: 006925**
Applied Internet Technologies
Provides a framework for integrating the content of the Internet Technologies Web Programming track into a complete and functioning web site. Creates a portfolio of a fully functional web site to aide in student employment within the Web Programming field. Pre-requisite: (CIT 140 AND CIT 171 AND CIT 253) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 258(3) **Course ID: 005211**
Internet Technologies Seminar
Incorporates research, study, and discussion of current and emerging topics, issues, and trends in Internet technologies. Requires participation in class presentations, as well as individual and/or group projects involving Internet technologies. Prerequisite: CIT 253 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 260(3) **Course ID: 004730**
Network Hardware Installation and Troubleshooting
Provides students with the knowledge and skills necessary to design, install, configure, and troubleshoot cabling systems and equipment used to connect a local area network. Prerequisite: CIT 160 or consent of instructor Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture

CIT 262(3) **Course ID: 005210**
MS Network Infrastructure
Provides students with the knowledge and skills necessary to install, configure, manage, and support a network infrastructure using a Microsoft Windows server operating system. Assists in prepping students for exams in the Microsoft certification exam series. Prerequisite: (CIT 213 AND CIT 219) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 263(1 - 6) **Course ID: 006246**
Advanced Topics in Microsoft Windows: (Topic)
Covers concepts and/or skills from special areas of interest in Microsoft Windows operating systems. Focus on specific topics that will vary from semester to semester at the discretion of the instructor. Prerequisite: CIT 213 or consent of instructor. Lecture: 1-6 credits (15-90 contact hours).
Components: Lecture
Attributes: Technical

CIT 265(3) **Course ID: 006195**
MS Application Servers
Focuses on the deployment, configuration and management of Microsoft servers that support users and applications, especially web servers, Remote Desktop servers SharePoint servers and file servers. Prerequisite: CIT 213 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 266(3) **Course ID: 006196**
MS Enterprise Administration
Focuses on Windows server administration at the enterprise level. Covers planning networks and services, designing core identity and access management components, implementing a public key infrastructure, planning for restructuring forests and domains, and designing a virtualization strategy. Prerequisite: (CIT 261 AND (CIT 214 OR CIT 262)) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 269(3) **Course ID: 004731**
Internet Protocols
Provide students with the knowledge and skills to install, configure, manage and troubleshoot internetworks using TCP/IP and its associated protocols. Prerequisite: (CIT 111 and CIT 160) or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: CIT 219

CIT 271(3) **Course ID: 004732**
SQL II
Provides an extensive overview of SQL using programming to create, query, manage and maintain databases.. Uses advanced features of SQL, including stored procedures and triggers, to design and interface with a database and other applications. Prerequisite: CIT 171 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 272(3) **Course ID: 016261**
Game Design Theory
Introduces students to the experience-oriented standards and techniques of gaming on a digital platform. Includes hands-on conceptualization and writing of a game created by the student. Emphasizes creativity, player experiences and motivations, styles of play, types of games, character creation, world creation, and story-driven narrative within a video game. Offers students the opportunity to complete an industry-quality Game Design Document. Pre-requisite: CIT/IMD 124 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Course Equivalents: IMD 272
Attributes: Technical

CIT 273(3) **Course ID: 016262**
Game Production
Provides students with the opportunity to produce a fully playable 3D video game using assets and materials created in previous courses. Offers students the opportunity to employ an industry-standard game engine to meld 3D content, audio, narrative, character, and environment into a professional and enjoyable video game experience. Pre-requisite: CIT/IMD 222 AND CIT/IMD 272 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Course Equivalents: IMD 273
Attributes: Technical

CIT 274(3) **Course ID: 016263**
Seminar in Game Development
Encompasses the three phases of game design and development: conception, creation, and marketing in this project-oriented seminar. Requires participation in class presentations, individual and group projects, development of a game, and creation of a portfolio. Pre-requisite: CIT/IMD 223 AND CIT/IMD 273 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Course Equivalents: IMD 274
Attributes: Technical

CIT 276(3) **Course ID: 006926**
3-D Game Development: Language
Provides students with an introduction to three-dimensional game creation. Includes the creation of a three-dimensional game development using an industry-specific or emerging programming language. Pre-requisite: CIT 246 (using the same programming language) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 277(3) **Course ID: 006927**
Programming III: Language
Introduces students to complex programming concepts using an industry-specific or emerging programming language. Includes complex features of the language not previously covered in Programming I and Programming II. Comprehensive projects will be developed that model work performed in a corporate environment. Pre-requisite: CIT 247 (for the same programming language) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 278(3) **Course ID: 006928**
Visual Basic III
Provides students with the knowledge and skills to design, develop, and implement distributed and Web client applications using the Visual Basic programming language. Includes advanced application and user interface design, custom libraries, ActiveX Objects, stored procedures, and distributed applications. Pre-requisite: CIT 248 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 281(4) **Course ID: 004736**
Routing
Provides students with the skills necessary to understand and apply concepts related to networking hardware. Covers advanced TCP/IP concepts such as IP addressing and subnetting, beginning router configuration, routed and routing protocols. Completes one of a series of four courses that prepares students for the Cisco Certified Network Associate (CCNA) certification exam. Prerequisite: CIT 160 or consent of instructor. Lecture: 4 credits (60 contact hours).
Components: Lecture

CIT 282(4) **Course ID: 004737**
Switching
Provides students with the skills necessary to understand and apply advanced networking concepts. Covers local area network (LAN) switching, virtual local area networks (VLANs), advanced network design concepts, advanced router configuration, and advanced network management projects. Completes one of four courses that prepares students for the Cisco Certified Network Associate (CCNA) certification exam. Prerequisite: CIT 160 or consent of instructor. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: Technical

CIT 283(4) **Course ID: 004738**
Wide Area Network Design and Management
Provides students with the skills necessary to understand and apply advanced principles and applications in deploying networking hardware. Covers WAN design, WAN connectivity protocols such as PPP, ISDN, and Frame Relay, as well as advanced network management projects. Completes the final of four courses that prepares students for the Cisco Certified Network Associate (CCNA) certification exam. Prerequisite: (CIT 281 and CIT 282) or consent of instructor. Lecture: 4 credits (60 contact hours).
Components: Lecture
Course Equivalents: CIT 212
Attributes: Technical

CIT 284(3) **Course ID: 006929**
Computer Forensics
Provides basic knowledge on methods and processes for computer forensics, intrusion detection, evidence collection, disk imaging, and report writing. Pre-requisite: CIT 180 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 285(3) **Course ID: 006930**
MS Windows OS Security
Provides students the knowledge and skills necessary to secure the Windows operating system. Pre-requisite: CIT 180 AND (CIT 214 OR CIT 262) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 286(3) **Course ID: 006931**
UNIX/Linux OS Security
Provides students the knowledge and skills necessary to secure the UNIX/Linux operating system and to utilize the UNIX/Linux operating system for security functions. Emphasizes use of freely available security tools. Pre-requisite: (CIT 180 AND CIT 217) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 287(3) **Course ID: 006932**
Cisco OS Security
Provides students with comprehensive understanding of network security concepts. Includes installation, troubleshooting and monitoring of network devices to maintain integrity, confidentiality and availability of data and devices. Covers implementation of hosts and perimeter edge device firewalls and defense in-depth prevention systems. Pre-requisite: (CIT 165 OR CIT 212) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 288(3) **Course ID: 006197**
Network Security
Provides students with the knowledge and skills necessary to understand and defend against a variety of computer and network attacks. Focuses on both the offensive techniques used to launch attacks and the defensive techniques required to defend computers and networks. Pre-requisite: (CIT 180 AND Level 1 Network Technologies Specialization Sequence) OR Consent of Instructor. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 290(3) **Course ID: 004733**
Instructor Consent Required
Internship
Provides on-the-job experience in computer and information technologies, requiring a minimum of 120 clock hours of appropriate experience approved by the faculty member (40 clock hours per credit); requires a learning contract, signed by the student, faculty member, and supervisor. Note: Course is offered on pass-fail basis only. Prerequisite: Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 291(3) **Course ID: 006198**
CIT Capstone
Apply acquired techniques, knowledge, and skills to successfully analyze, design, and plan a CIT project. Develop key project management and system analysis deliverables in a portfolio. Prerequisite: 36 credit hours of CIT Courses OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 295(1 - 3) **Course ID: 004741**
Independent Problems in CIT: Topic
Explores concepts and/or skills from special areas of interest in Computer & Information Technologies. Topics vary from semester to semester. May be repeated up to two times with different topics to a maximum of 6 credit hours. Pre-requisite: Consent of Instructor. Lecture: 1.0 - 3.0 credits (15 - 45 contact hours).
Components: Lecture
Attributes: Technical

CIT 299(1 - 3) **Course ID: 004742**
Special Topics in CIT: (Topic)
Explores concepts and/or skills from special areas of interest in computer and information systems. May be repeated with different topics to a maximum of 6 credit hours. Pre-requisite: Consent of Instructor. Lecture: 1.0 - 3.0 credits (15-45 contact hours).
Components: Lecture
Attributes: Technical

CIT 1051(0.5) **Course ID: 006972**
Computer Basics
Provides an introduction to the computer and the convergence of technology including computer hardware and software, the social web, green computing, security and computer ethics. Pre-requisite: RDG 20 OR Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

CIT 1052(0.6) **Course ID: 006973**
System and Utility Software
Introduces file management and presents basic use of systems and utility software. Pre-requisite: RDG 20 OR Consent of Instructor. Lecture: 0.6 credits (9.0 contact hours).
Components: Lecture

CIT 1053(0.8) **Course ID: 006974**
Internet, Email, and Networks
Introduces the Internet, e-mail, course management systems and networking. Pre-requisite: RDG 20 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1054(0.5) **Course ID: 006975**
Globalization and the Cloud
Introduces globalization and impact and use of cloud computing. Pre-requisite: RDG 20 OR Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

CIT 1055(0.6) **Course ID: 006976**
Software Basics
Presents basic use of application and programming software. Pre-requisite: RDG 20 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1111(0.8) **Course ID: 007091**
Computer Hardware Essentials
Provides a practical view of hardware components. Pre-requisite: (CIT 105 AND MAT 065) OR Consent of Instructor Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1112(0.8) **Course ID: 007092**
Computer Maintenance
Provides a practical view of troubleshooting, repair, and maintenance. Pre-requisite: CIT 1111 or Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1113(1) **Course ID: 007093**
Operating Systems and Tools
Provides a practical view of operating system interfaces and management tools. Pre-requisite: CIT 1112 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1114(0.8) **Course ID: 007094**
Networking and Security
Provides a practical view of networking components and computer security. Pre-requisite: CIT 1113 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1115(0.6) **Course ID: 007095**
Operational Procedures
Provides a practical view of operational procedures. Pre-requisite: CIT 1114 OR Consent of Instructor. Lecture: 0.6 credits (9.0 contact hours).
Components: Lecture

CIT 1201(1) **Course ID: 006977**
Basic Program Logic
Presents an introduction to computer programming and logic including program flow, data types and variables, and design tools. Pre-requisite: Digital Literacy AND MAT 085 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1202(1) **Course ID: 006978**
Control and Data Structures
Provides development and design basics to appropriately select control and data structures. Pre-requisite: CIT 1201 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1203(1) **Course ID: 006979**
Computer Program Application
Develop and design language-independent solutions, or computational thinking, to solve computer-related problems. Pre-requisite: CIT 1202 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1251(1) **Course ID: 016856**
Intro to Projection
Projections, coordinate systems and basic mapping software utilization are introduced. Pre-requisite: CIT 105 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 1252(1) **Course ID: 016857**
Intro to Publishing Maps
Displaying data and publishing of information are explored. Pre-requisite: CIT 1251 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 1253(1) **Course ID: 016858**
Intro to Geospatial Data
Data analysis, remote sensing and database manipulation. Pre-requisite: CIT 1252 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 1301(0.8) Course ID: 006980
Word Processing Applications
Utilizes word processing application software to solve common business problems. Pre-requisite: CIT 105 OR OST 105 OR IMD 100 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1302(0.8) Course ID: 006981
Spreadsheet Applications
Utilizes spreadsheet application software to solve common business problems. Pre-requisite: Computer Literacy OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1303(0.8) Course ID: 006982
Database Applications
Utilizes database application software to solve common business problems. Pre-requisite: Computer Literacy OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1304(0.6) Course ID: 006983
Presentation Software Apps
Utilizes current presentation software application software to solve common business problems. Pre-requisite: Computer Literacy OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1401(0.6) Course ID: 006984
JavaScript Basics
Provides an overview of the JavaScript language. Introduces variables, operators, and data types. Pre-requisite: CIT 120 AND (CIT 150 or CIT 155) OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1402(0.8) Course ID: 006985
Input/Output Processes
Introduces input and output statements using JavaScript. Identifies errors and code efficiency. Pre-requisite: CIT 1401 OR Consent of Instructor. Lecture: 0.8 credits (12 contact)
Components: Lecture

CIT 1403(0.8) Course ID: 006986
Control Structures/Patterns
Introduces control structures and application scripts using JavaScript. Identifies errors and code efficiency. Pre-requisite: CIT 1402 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1404(0.8) Course ID: 006987
JavaScript Objects/Scripts
Introduces objects and application scripts using JavaScript. Identifies errors and code efficiency. Pre-requisite: CIT 1403 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1421(0.6) Course ID: 006988
C++ Overview
Introduces fundamental programming concepts using the C++ programming language. Pre-requisite: CIT 120 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1422(0.8) Course ID: 006989
C++ Control Structures
Introduces control structures for the C++ language. Identifies errors and code efficiency. Pre-requisite: CIT 1421 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1423(0.8) Course ID: 006990
C++ Functions
Introduces functions for the C++ language. Identifies errors and code efficiency. Pre-requisite: CIT 1422 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1424(0.8) Course ID: 006991
C++ Arrays and Pointers
Introduces arrays and pointers for the C++ language. Identifies errors and code efficiency. Pre-requisite: CIT 1423 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1441(1) Course ID: 016607
Python Overview
Introduces fundamental programming concepts (including data types and control structures) using the Python programming language. Pre-requisite: CIT 120 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 1442(1) Course ID: 016608
Functions and Data Structures
Introduces simple data structures, error-handling, modular programming, and file processing using the Python programming language. Pre-requisite: CIT 1441 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1443(1) Course ID: 016609
Python OOED Programming
Introduces object-oriented event-driven programming and graphical user interfaces using the Python programming language. Pre-requisite: CIT 1442 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1481(0.6) Course ID: 006992
Visual Basic Overview
Introduces fundamental programming concepts using the Visual Basic programming language. Pre-requisite: CIT 120 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1482(0.8) Course ID: 006993
VB Control Structures
Introduces control structures for the VB language. Identifies error-handling and code evaluation. Pre-requisite: CIS 1481 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1483(0.8) Course ID: 006994
VB Arrays
Introduces arrays and object oriented programming for the VB language. Identifies error-handling and code evaluation. Pre-requisite: CIS 1482 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1484(0.8) Course ID: 006995
VB File Processing
Presents modular programming and file processing for the VB language. Identifies error-handling and code evaluation. Pre-requisite: CIS 1483 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1491(1) Course ID: 016592
Java Programming Structure
Introduces students to fundamental programming concepts using the Java programming language including data types, control structures, error-handling, and simple data structures. Pre-requisite: CIT 120 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 1492(1) Course ID: 016593
Java Object Oriented Design
Introduces students to fundamental programming concepts using the Java programming language to develop object-oriented and modular programming. Pre-requisite: CIT 1491 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours)
Components: Lecture

CIT 1493(1) Course ID: 016594
The Java GUI
Introduces students to fundamental programming concepts using the Java programming language to develop graphical user interfaces. Pre-requisite: CIT 1492 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 1501(0.6) Course ID: 006996
Internet Technologies
Presents traditional and emerging Internet technologies including Internet fundamentals and governing organizations for the web. Pre-requisite: (CIT 105 AND CIT 120) OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1502(0.6) Course ID: 006997
Internet Tools
Provides an overview of Internet Technologies and protocols across the Internet. Pre-requisite: CIT 1501 or Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1503(0.8) Course ID: 006998
eCommerce
Presents practical eCommerce strategies for publishing on the web including core connectivity, naming conventions, and web registration. Pre-requisite: CIT 1502 or Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1504(1) Course ID: 006999
Web Programming
Creates basic web content using HTML and client/server applications to publish to the web. Pre-requisite: CIT 1503 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 1551(1) Course ID: 016715
Web Page Development Basics
Introduces web page design through the use of HTML and CSS. Emphasizes W3C web design and accessibility standards. Pre-requisite: CIT 105 OR consent of instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 1552(1) Course ID: 016716
Web Page Development Formatting
Uses text and/or web editors to create web documents with various formats and page layouts, multimedia, tables and forms. Emphasizes W3C web design and accessibility standards. Pre-requisite: CIT 1551 OR consent of instructor. Lecture: 1.0 credit (15 contact hours)
Components: Lecture

CIT 1553(1) Course ID: 016717
Web Page Development Publishing
Implements web page design through the use of HTML and CSS. Emphasizes W3C web design and accessibility standards. Pre-requisite: CIT 1552 OR consent of instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 1571(1) Course ID: 016718
Fundamentals of Web Design
Introduces web site production and design process. Pre-requisite: CIT 105 OR Consent of Instructor. Lecture: 0.5 credit hours (7.5 contact hours) Laboratory: 0.5 credit hours (15 contact hours).
Components: Laboratory, Lecture

CIT 1572(1) Course ID: 016719
Website Design and Accessibility
Introduces web site design with particular emphasis on design involving layout, navigation, and interactivity. Pre-requisite: CIT 1571 OR Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours) Laboratory: 0.5 credits (15 contact hours).
Components: Laboratory, Lecture

CIT 1573(1) Course ID: 016720
Web Site Media and Production
Introduces web site production software. Pre-requisite: CIT 1752 OR Consent of Instructor. Lecture 1.0 credit (15 contact hours)
Components: Lecture

CIT 1601(1) Course ID: 007000
Networking Basics
Introduces non-vendor specific technical level networking concepts. Pre-requisite: MAT 65 OR Consent of Instructor. Pre-requisite OR Co-requisite: CIT 111 OR Consent of Instructor. Lecture: 1.0 credit (15 credit hours).
Components: Lecture

CIT 1602(1) Course ID: 007001
Network Media and Technologies
Introduces non-vendor specific networking concepts such as the media, technologies, topologies, and devices. Pre-requisite: CIT 1601 OR Consent of instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 1603(1) Course ID: 007002
Network Management
Presents the basics of how to manage, maintain, troubleshoot, install, operate, and configure basic network infrastructure. Pre-requisite: CIT 1602 OR Consent of Instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 1604(1) Course ID: 007003
Network Tools and Security
Introduces tools used to troubleshoot and secure networks. Pre-requisite: CIT 1603 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1611(0.3) Course ID: 016318
Network Basics
Introduces students to basic concepts and components of a data network and the Internet, architecture, structure, functions, components, and models. Pre-requisite: MAT 065 OR Consent of Instructor. Pre-requisite OR Co-requisite: CIT 111 OR Consent of Instructor. Lecture: 0.3 credits (4.5 contact hours).
Components: Lecture

CIT 1612(0.4) Course ID: 016319
Protocol Models
Describes the principles of simple LAN development including the OSI and TCP/IP models, the encapsulation process, and data flow between two hosts across a network. Pre-requisite: CIT 1611 OR Consent of Instructor. Lecture: 0.4 credits (6 contact hours).
Components: Lecture

CIT 1613(0.6) Course ID: 016320
OSI Layer Operations
Describes the functions and responsibilities of the various OSI model layers pertaining to simple LANs. Pre-requisite: CIT 1612 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1614(0.7) Course ID: 016321
Basic IP Addressing
Introduces the format, function, and types of IP addressing used in simple LAN networks. Pre-requisite: CIT 1611 OR Consent of Instructor. Lecture: 0.7 credits (10.5 contact hours).
Components: Lecture

CIT 1615(1) Course ID: 016322
IP Subnetting
Introduces the designing implementation of IP addressing schemes for simple LAN networks including IPv4 and IPv6. Pre-requisite: CIT 1614 OR Consent of Instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

CIT 1616(0.5) Course ID: 016323
Ethernet Networks
Introduces the fundamental Ethernet concepts including operation and design of an Ethernet network. Pre-requisite: CIT 1613 OR Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

CIT 1617(0.5) Course ID: 016325
Configuring Switches & Routers
Introduces basic configuration of routers and switches using the command line interface (CLI) including utilities to test and monitor the operation of a simple LAN network. Pre-requisite: CIT 1616 OR Consent of Instructor. Lecture 0.5 credits (7.5 contact hours).
Components: Lecture

CIT 1621(1) Course ID: 007004
Hardware and Operating Systems
Provides concepts about PC hardware and operating systems. Pre-requisite: MAT 065 OR Consent of instructor. Pre-requisite OR Co-requisite: CIT 111 OR Consent of instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1622(1) Course ID: 007005
Network Connections & Resources
Presents concepts and skills for connecting computer hardware to a network. Provides overview of network addressing, services, and security. Pre-requisite: CIT 1621 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1623(1) Course ID: 007006
Network Troubleshooting
Provides concepts and techniques for troubleshooting errors and issues on a network. Pre-requisite: CIT 1622 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1624(1) Course ID: 007007
Network Planning
Provides skills for planning and implementing a small network. Pre-requisite: CIT 1623 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1631(1) Course ID: 007008
Internet Communications
Provides a basic overview of the Internet, network models, and ISP troubleshooting. Develops skills for computer technicians, network and help desk technicians. Pre-requisite: CIT 162 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1632(1) Course ID: 007009
Planning/Upgrading Networks
Provides a basic overview of networks including planning and upgrades. Develops skills required for computer technicians, network and help desk technicians. Pre-requisite: CIT 1631 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1633(1) Course ID: 007010
Configuring Networks
Provides a basic overview of routing, remote access, and covers servers that provide e-mail services. Develops skills required for computer technicians, network and help desk technicians. Pre-requisite: CIT 1632 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1634(1) Course ID: 007011
Maintaining Networks
Provides a basic overview of network monitoring, recovery procedures, and troubleshooting. Develops skills required for computer technicians, network and help desk technicians. Pre-requisite: CIT 1633 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1671(0.3) Course ID: 016326
Intro to Switching
Covers basic concepts and operation of switched networks, including LAN design, architecture and components. Describes basic operations of switches including configuration and port security. Pre-requisite: CIT 161 OR Consent of Instructor. Lecture: 0.3 (4.5 contact hours).
Components: Lecture

CIT 1672(0.5) Course ID: 016327
Enhanced Switching
Describes virtual LAN (VLAN) basics and implementation. Pre-requisite: CIT 1671 or Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

CIT 1673(0.6) Course ID: 016328
Routing Processes
Covers operations of routers in a small network including static and default routing. Examines the role of the router and the routing tables in a network. Pre-requisite: CIT 161 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours)
Components: Lecture

CIT 1674(0.6) Course ID: 016329
Inter-VLAN Routing
Describes the operation and configuration of routing between VLANs in a small network Helps students configure and troubleshoot routers and switches and resolve common issues. Pre-requisite: (CIT 1672 AND CIT 1673) OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1675(0.5) Course ID: 016330
Routing Protocols & RIP
Describes dynamic routing protocols. Covers basic concepts and configuration of RIPv1 and RIPv2. Pre-requisite: CIT 1673 OR Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

CIT 1676(0.5) Course ID: 016331
OSPF
Describes the operation and basic configuration of single-area OSPF routing in a small network. Pre-requisite: CIT 1675 OR Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

CIT 1677(0.5) Course ID: 016332
Access Control Lists
Describes standard, extended, and named access control lists (ACLs), for IPv4 and IPv6 in a small network. Pre-requisite: CIT 161 OR Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

CIT 1678(0.5) Course ID: 016333
DHCP and NAT
Covers operations and configuration of DHCP on routers in a small network. Describes the operation and configuration of static NAT, dynamic NAT, and port address translation (PAT). Pre-requisite: CIT 1677 OR Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

CIT 1701(0.6) Course ID: 007013
Database Concepts
Provides an overview of database and database management system concepts. Pre-requisite: (CIT 105 OR OST 105 OR IMD 100) AND (MAT 085 OR MAT 126) OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1702(1) Course ID: 007014
Database Modeling and Design
Provides an overview of database internal design models, normalization, and network data models. Pre-requisite: CIT 1701 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1703(0.8) Course ID: 007015
Database Implementation
Provides an overview of designing a database model and implementation. Introduces Structured Query Language (SQL). Pre-requisite: CIT 1702 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1704(0.6) **Course ID: 007016**
Database Admin and Management
Provides an overview of optimization strategies and methods including administration, performance tuning, backup, and recovery. Pre-requisite: CIT 1703 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1711(1) **Course ID: 016334**
Database Creation using SQL
Introduces SQL techniques used in database/table creation. Pre-requisite: CIT 120 AND CIT 170, OR consent of instructor. Lecture 1.0 credits (15 contact hours).
Components: Lecture

CIT 1712(1) **Course ID: 016335**
Basic Data Retrieval using SQL
Examines SQL techniques for data retrieval and organization. Pre-requisite: CIT 1711. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 1713(1) **Course ID: 016336**
Advanced SQL Techniques
Applies SQL techniques for multiple table queries, functions and subqueries. Pre-requisite: CIT 1712. Lecture: 1 credit (15 contact hours).
Components: Lecture

CIT 1801(0.8) **Course ID: 007017**
Security Concepts
Introduces basic security concepts and methodologies. Assists in the preparation of the COMPTIA Security+ examination. Pre-requisite: ((CIT 105 OR OST 105) AND (CIT 160 OR CIT 161)) OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1802(0.8) **Course ID: 007018**
Threats and Vulnerabilities
Introduces threats and vulnerabilities in relation to computer and network devices. Pre-requisite: CIT 1801 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1803(0.8) **Course ID: 007019**
Network Security
Introduces basic network security concepts and methodologies including application, data, and host security, access control, and identity management. Pre-requisite: CIT 1802 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1804(0.6) **Course ID: 007020**
Cryptography
Introduces cryptography, tools, and management of keys and certificates. Pre-requisite: CIT 1803 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1821(0.8) **Course ID: 007021**
Security Defense and Protocols
Presents information and skills required to secure computers and networks from attacks. Pre-requisite: CIT 180 or consent of instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1822(0.8) **Course ID: 007022**
Firewalls
Presents information and techniques for configuring and using firewalls to secure computers and networks. Pre-requisite: CIT 1821 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1823(0.6) **Course ID: 007023**
Perimeter Testing
Performs methods and skills for conducting perimeter defense testing against attacks. Pre-requisite: CIT 1822 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1824(0.8) **Course ID: 007024**
Intrusion Detection
Presents information and techniques for configuring intrusion-detection systems to secure computers and networks. Pre-requisite: CIT 1823 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1841(0.8) **Course ID: 007025**
Ethical Hacking concepts
Present concepts about ethical hacking. Pre-requisite: CIT 180 or consent of instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1842(1) **Course ID: 007026**
Computer/Network Attacks
Presents various types of attacks and exploits against computers and networks. Pre-requisite: CIT 1841 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 1843(0.8) **Course ID: 007027**
Malicious Software and Defense
Presents effective defensive techniques against real attacks. Pre-requisite: CIT 1842 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1844(0.4) **Course ID: 007028**
Incident Handling
Provides concepts and techniques for proper incident handling and documentation. Pre-requisite: CIT 1843 OR Consent of Instructor. Lecture: 0.4 credits (6 contact hours).
Components: Lecture

CIT 2091(1) **Course ID: 016595**
Advanced Switching
Describes the operation and configuration of advanced switching technologies in networks, including STP, RSTP, and link aggregation. Pre-requisite: CIT 167 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 2092(1) **Course ID: 016596**
Single- and Multi-area OSPF
Covers advanced single-area OSPF and multi-area OSPF operation and configuration in both IPv4 and IPv6 networks. Pre-requisite: CIT 2091. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 2093(1) **Course ID: 016597**
EIGRP
Covers the operation and configuration of EIGRP in both IPv4 and IPv6 networks. Pre-requisite: CIT 2092 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 2094(1) **Course ID: 016598**
LAN/Wireless Design & IOS
Covers the Cisco model for LAN design, operation and configuration of wireless LANs, and the basics of IOS licensing. Pre-requisite: CIT 2093 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours)
Components: Lecture

CIT 2121(1.2) **Course ID: 016722**
WANs, PPP, and Frame Relay
Covers WAN technologies and network services used in complex networks, including PPP and Frame Relay. Enables students to understand the selection criteria design principles of WAN technologies to meet network requirements. Pre-requisite: CIT 209 or Consent of Instructor. Lecture: 1.2 credits (18 contact hours).
Components: Lecture

CIT 2122(1.2) **Course ID: 016723**
Configuring Connections
Covers configuration and troubleshooting of common networking operations including Dynamic Host Configuration Protocol (DHCP) and Network Address Translation (NAT). Explains network monitoring, troubleshooting tools, and strategies to resolve common network issues. Pre-requisite: CIT 2091 or Consent of Instructor. Lecture: 1.2 credits (18 contact hours).
Components: Lecture

CIT 2123(1) **Course ID: 016724**
Securing Network Access
Covers network security tools including Access Control Lists (ACL) and Virtual Private Networks (VPN) in a complex network. Enables students to successfully configure network devices to implement security on networks. Pre-requisite: CIT 2092 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours)
Components: Lecture

CIT 2124(0.6) **Course ID: 016725**
Network Design
Covers WAN technologies (specifically the Cisco Enterprise Architecture model) for use in complex network design. Introduces emerging enterprise architecture models, such as Borderless Network, Data Center/ Virtualization, and Collaboration architectures. Pre-requisite: CIT 2093 or Consent of Instructor. Lecture 0.6 credits (9.0 contact hours).
Components: Lecture

CIT 2131(0.6) **Course ID: 007029**
Window OS Installation & Setup
Provides concepts and skills for installation, setup, and management of the current Microsoft Windows operating system. Assists in the preparation of exams in the Microsoft certification exam series. Pre-requisite: CIT 111 AND (CIT 160 OR CIT 161) OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 2132(0.6) **Course ID: 007030**
Network Connectivity
Provides concepts and skills for managing network connections, configuring IP settings, and network settings in the current Microsoft Windows operating system environment. Assists in the preparation of exams in the Microsoft certification exam series. Pre-requisite: CIT 2131 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 2133(0.6) **Course ID: 007031**
Windows OS Resources
Provides concepts and skills for managing user accounts and access to resources in the current Microsoft Windows operating system environment. Assists in the preparation of exams in the Microsoft certification exam series. Pre-requisite: CIT 2132 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 2134(0.6) **Course ID: 007032**
Mobility Configurations
Provides concepts and skills for configuring mobility options and security in the current Microsoft Windows operating system environment. Assists in the preparation of exams in the Microsoft certification exam series. Pre-requisite: CIT 2133 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 2135(0.6) **Course ID: 007033**
Monitoring Windows Systems
Provides concepts and skills for managing updates and local performance, monitoring system performance and resource usage, configuring backups, system recovery, and troubleshooting the boot process in the current Microsoft Windows operating system environment. Assists in the preparation of exams in the Microsoft certification exam series. Pre-requisite: CIT 2134 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 2141(1) **Course ID: 007096**
OS Server Concepts
Presents an overview of network concepts such as TCP/IP addressing and subnetting. Provides concepts and skills to install and setup Windows Server. Assists in the preparation of exams in the Microsoft certification exam series. Pre-requisite: (CIT 111 and (CIT 160 or CIT 161)) OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 2142(1) **Course ID: 007097**
Server Management Services
Presents an overview of network concepts such as DNS, Hyper-V. DCHP, and DFS. Assists in the preparation of exams in the Microsoft certification exam series. Pre-requisite: CIT 2141 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 2143(1) **Course ID: 007098**
Server Role Policy
Presents skills and knowledge to configure and manage server role policy and security compliance. Assists in the preparation of exams in the Microsoft certification exam series. Pre-requisite: CIT 2142 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 2151(0.75) **Course ID: 016337**
Initial Server Deployment
Introduces skills necessary to install and configure Microsoft® Windows® Server. Covers initial network installation & configuration of a file server including update policy, file and folder access policies and security at an intermediate level. Pre-requisite: CIT 214 or Consent of instructor. Lecture: 0.75 credits (11.25 contact hours).
Components: Lecture

CIT 2152(0.75) **Course ID: 016338**
Administering the Server
Introduces skills to administer a Windows Server deployment. Covers server infrastructure monitoring, remote access configuration, and network policy implementation in an enterprise environment. Pre-requisite: CIT 2151 or Consent of instructor. Lecture: 0.75 credits (11.25 contact hours).
Components: Lecture

CIT 2153(0.75) **Course ID: 016339**
Administering the Domain
Provides students with the knowledge and skills to design, develop, and evaluate databases and web servers including an integrated web database application in ecommerce and Web scripting. Covers creation of a database-driven web site. Pre-requisite: CIT 2152 or Consent of instructor. Lecture: 0.75 credits (11.25 contact hours).
Components: Lecture

CIT 2154(0.75) **Course ID: 016340**
Advanced Administration Topics
Covers skills needed to administer a Windows Server Domain regarding setup and maintenance of Group Policy infrastructure, advanced networking topics, and DNS deployments. Pre-requisite: CIT 2153 or Consent of instructor. Lecture: 0.75 credits (11.25 contact hours).
Components: Lecture

CIT 2161(1) **Course ID: 016610**
Advanced Active Directory
Covers the advanced configuration tasks necessary to deploy, manage and maintain a Windows Server environment, including advanced network and file services. Helps prepare students to implement a core Windows Server 2012 infrastructure in an enterprise environment. Pre-requisite: CIT 214. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 2162(1) **Course ID: 016611**
Server High Availability
Covers the advanced configuration tasks necessary to deploy, manage and maintain a Windows Server environment, including Dynamic Access Control, network load balancing, and Failover Clustering. Helps prepare students to implement a core Windows Server 2012 infrastructure in an enterprise environment. Pre-requisite: CIT 2161 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 2163(1) **Course ID: 016612**
Disaster Recovery &AD Services
Covers the advanced configuration tasks necessary to deploy, manage and maintain a Windows Server environment, including disaster recovery, certificate services, and identity federation. Helps prepare students to implement a core Windows Server 2012 infrastructure in an enterprise environment. Pre-requisite: CIT 2162 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 2171(0.8) **Course ID: 007034**
Intro to UNIX/Linux
Introduces basic Unix/Linux concepts. Pre-requisite:(CIT 111 AND CIT 160) OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 2172(0.8) **Course ID: 007035**
Accounts, Resources, & Editors
Presents Unix/Linux commands to manage accounts, file systems and resources. Introduces editors for creating text files. Pre-requisite: CIT 2171 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 2173(1.4) **Course ID: 007036**
File Processing and Lab
Introduces commands and scripts for file processing. Pre-requisite: CIT 2172 OR Consent of Instructor. Lecture: 0.4 credits (6 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Lecture

CIT 2251(1) **Course ID: 016859**
Spatial Analysis
Georeferrencing and digitization will be mastered. Pre-requisite: CIT 125 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 2252(1) **Course ID: 016860**
3D Spatial Analysis
Creation of three dimensional surfaces from digital elevation models. Pre-requisite: CIT 2251 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 2253(1) **Course ID: 016861**
Field Data
Collection of field data and the analysis of the collected data. Pre-requisite: CIT 2252 or Consent of Instructor. Pre-requisite: CIT 2252 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours)
Components: Lecture

CIT 2321(1) **Course ID: 016341**
Help Desk & Customer Service
Explores help desk concepts and customer service skills. Pre-requisite: CIT 105 OR Consent of Instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

CIT 2322(1) **Course ID: 016342**
Help Desk Tools & Techniques
Introduces a variety of tools and techniques to provide user support in help desk operations. Explores troubleshooting problems, help desk operations and software, needs analysis, and facilities management. Pre-requisite: CIT 2321. Lecture: 1 credit (15 contact hours).
Components: Lecture

CIT 2323(1) **Course ID: 016343**
End User Support
Explores writing for end users, training end users and other topics related to end user support. Pre-requisite: CIT 2322. Lecture: 1 credit (15 contact hours).
Components: Lecture

CIT 2341(1) **Course ID: 016613**
Advanced Word Processing
Uses advanced functions of word processing. Includes working with complex documents creating and preparing data distribution on the web. Pre-requisite: CIT 130 or Instructor Consent. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 2342(1) **Course ID: 016614**
Advanced Presentation Software
Uses advanced functions of presentation software. Includes working with complex documents creating and preparing data distribution on the web. Pre-requisite: CIT 2341. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 2343(0.75) **Course ID: 016615**
Advanced Digital Communication
Uses advanced functions of electronic communications software. Includes working with complex documents creating and preparing data distribution on the web. Lecture: 0.75 credits (11 contact hours).
Components: Lecture

CIT 2344(0.25) **Course ID: 016616**
Software Options
Explore alternative software options. Includes using alternative office suites and collaboration between software packages. Pre-requisite: CIT 2343. Lecture: 0.25 credits (4 contact hours).
Components: Lecture

CIT 2361(1) **Course ID: 016617**
Reports, Forms, & Macros
Uses advanced database techniques used in forms, reports, macros, and data integration, for the preparation of data distribution on the web. Pre-requisite: CIT 130 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 2362(1) **Course ID: 016618**
Database Queries and Tables
Uses advanced database techniques used in data integration, pivot tables and charts, and queries, for the preparation of data distribution on the web. Pre-requisite: CIT 2361. Lecture: 1.0 credits (15 contact hours)
Components: Lecture

CIT 2363(1) **Course ID: 016619**
Advanced Database Techniques
Uses advanced database techniques used in spreadsheet layout and design, data manipulation and management, and VBA applications with Active X, for the preparation of data distribution on the web. Pre-requisite: CIT 2362. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 2481(1) **Course ID: 016620**
Advanced Application Design
Provides students with an extensive overview of designing advanced computer applications using the Visual Basic programming language. Includes graphical user interfaces, event-driven programming, and modular programming. Pre-requisite: CIT 148 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 2482(1) **Course ID: 016621**
OO Programming & Code Apps
Provides students with an extensive overview of designing advanced computer applications using the Visual Basic programming language. Includes object-oriented programming and advanced data types and structures. Pre-requisite: CIT 2481 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 2483(1) **Course ID: 016622**
Validation and Processing
Provides students with an extensive overview of designing advanced computer applications using the Visual Basic programming language. Includes input validation, error-handling, and file and database processing. Pre-requisite: CIT 2482 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 2491(1) Course ID: 016623
Advanced Java Components
Provides students with an extensive overview of designing and developing advanced object-oriented applications using the Java programming language. Includes advanced GUI components, input and output streams (file processing), and multithreading. Pre-requisite: CIT 149 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 2492(1) Course ID: 016624
Java Type Theory and Classes
Provides students with an extensive overview of designing and developing advanced object-oriented applications using the Java programming language. Includes polymorphism, inheritance, and recursion. Pre-requisite: CIT 2491 or Consent of Instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

CIT 2493(1) Course ID: 016625
Mobile Apps & Adv. Functions
Provides students with an extensive overview of designing and developing advanced object-oriented applications using the Java programming language. Includes mobile computing and other advanced topics. Pre-requisite: CIT 2492 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 2531(1) Course ID: 016344
Web Servers and Applications
Provides students with the knowledge and skills to design and develop client-side and server-side applications for data driven web sites. Includes development of skills related to the installation and configuration of web servers. Pre-requisite: (CIT 150 AND CIT 170 AND Approved Level I Programming Language) OR Consent of Instructor. Lecture: 1.0 credits (15 contact hours)
Components: Lecture

CIT 2532(1) Course ID: 016345
Databases and E-Commerce
Includes the study of databases and web servers in e-commerce, transaction processing, and web scripting. Emphasizes designing and developing a functional e-commerce supporting database for a dynamic web site. Pre-requisite: CIT 2531. Lecture: 1 credit (15 contact hours).
Components: Lecture

CIT 2533(1) Course ID: 016346
Integrated Web Databases
Provides students with the knowledge and skills to design, develop, and evaluate an integrated web database application. Includes the creation of a functional database driven web site. Pre-requisite: CIT 2532. Lecture: 1 credit (15 contact hours).
Components: Lecture

CIT 2611(0.75) Course ID: 007099
Win Directory Services Overview
Provides knowledge and skills to configure and implement directory services, domains, and user accounts. Pre-requisite: CIT 213 OR Consent of Instructor. Lecture: 0.75 credits (11.25 contact hours).
Components: Lecture

CIT 2612(0.75) Course ID: 007100
Directory Objects & Publishing
Focuses on creation and management of directory objects, trees, and objects and publishing resources. Pre-requisite: CIT 2611 OR Consent of Instructor. Lecture: 0.75 credits (11.25 contact hours).
Components: Lecture

CIT 2613(0.75) Course ID: 007101
Dir Services Group Policy
Explains how to configure group policy settings to manage directory services such as users, desktop environment, software, and security settings. Pre-requisite: CIT 2612 OR Consent of Instructor. Lecture: 0.75 credits (11.25 contact hours).
Components: Lecture

CIT 2614(0.75) Course ID: 007102
Directory Management & Services
Explains how to configure and manage operations, restoration, and replication of Directory Services. Pre-requisite: CIT 2613 OR Consent of Instructor. Lecture: 0.75 credits (11.25 contact hours).
Components: Lecture

CIT 2641(0.75) Course ID: 007037
Windows Server Deployment
Plan infrastructure deployment and services including server roles, access control, and group policy. Pre-requisite: (CIT 261 AND (CIT 214 OR CIT 262)) OR Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours). Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

CIT 2642(0.75) Course ID: 007038
Planning Directory Services
Plan application, file, and print services. Pre-requisite: CIT 2641 OR Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours). Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

CIT 2643(0.75) Course ID: 007044
Server Management Strategies
Design and manage infrastructure and server strategies. Pre-requisite: CIT 2642 OR Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours). Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

CIT 2644(0.75) Course ID: 007039
Windows Server Security
Provides management and monitoring of windows servers including security. Pre-requisite: CIT 2643 OR Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours). Lab: 0.25 credits (7.5 contact hours).
Components: Lecture

CIT 2781(1) Course ID: 016626
Distributed Application Design
Provides students with the knowledge and skills to design, develop, and implement Web client applications using the Visual Basic programming language. Includes advanced application and user interface design, and custom libraries. Pre-requisite: CIT 248 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 2782(1) Course ID: 016627
Active X Data Objects
Provides students with the knowledge and skills to design, develop, and implement Web client applications using the Visual Basic programming language. Includes ActiveX Objects and stored procedures. Pre-requisite: CIT 2781 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 2783(1) Course ID: 016628
Security & Distributed Apps
Provides students with the knowledge and skills to design, develop, and implement distributed and Web client applications using the Visual Basic programming language. Includes distributed applications. Pre-requisite: CIT 2782 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CIT 2841(0.6) Course ID: 007040
Computer Forensics Overview
Provides a computer forensics overview and presents concepts about forensics investigations. Pre-requisite: CIT 180 or consent of instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 2842(0.4) Course ID: 007041
Forensics Lab Setup
Provides concepts and skills for setting a computer forensics lab and data acquisition. Pre-requisite: CIT 2841 OR Consent of Instructor. Lecture: 0.4 credits (6 contact hours).
Components: Lecture

CIT 2843(1) Course ID: 007042
Digital Evidence Procurement
Provides basic knowledge on methods and processes for collection and analyzing digital evidence. Pre-requisite: CIT 2842 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 2844(1) Course ID: 007043
Investigations and Reporting
Provides basic knowledge on methods and processes for investigations and reporting. Pre-requisite: CIT 2843 OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 2881(1) Course ID: 007103
Network Security Basics
Identifies importance of computer ethics in relation to hacking and defending against computer and network threats. Pre-requisite: (CIT 180 AND Level 1 Network Technologies Specialization Sequence) OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 2882(1) Course ID: 007104
Network Attacks & Lab
Provides students with the knowledge and skills to defend against a variety of computer and network attacks. Focuses on the offensive techniques used to launch attacks. Pre-requisite: CIT 2881 OR Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours). Lab: 0.5 credit (15 contact hours).
Components: Laboratory, Lecture

CIT 2883(1) Course ID: 007105
Network Vulnerability & Lab
Provides students with the knowledge and skills necessary to identify and proactively defend against computer and network attacks. Focuses on the defensive techniques required to defend computers and networks. Pre-requisite: CIT 2882 OR Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours). Lab: 0.5 credits (15 contact hours).
Components: Laboratory, Lecture

CIT 2911(1) Course ID: 007106
Project Management Concepts
Introduces basic project management and systems analysis concepts. Pre-requisite: 36 hours of CIT courses OR Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

CIT 2912(0.8) Course ID: 007107
Project Planning
Applies acquired techniques, knowledge, and skills to successfully analyze, design, and plan a CIT project. Pre-requisite: CIT 2911 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 2913(0.6) Course ID: 007108
Project Implementation
Applies acquired techniques, knowledge, and skills to successfully implement a CIT project. Pre-requisite: CIT 2912 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 2914(0.6) Course ID: 007109
Project Evaluation
Prepares students to develop and present key project management and system analysis deliverables in a portfolio including evaluation of a project. Enhances soft skills for employability. Pre-requisite: CIT 2913 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CLA Classical Languages & Literature

CLA 131(3) **Course ID: 000274**
Medical Terminology from Greek and Latin
Latin and Greek roots, prefixes, and suffixes as found in medical terminology. Primarily for pre-medical, pre-dental, pre-nursing, and pre-veterinary students, but others will be admitted for help in vocabulary building.
Components: Lecture
Attributes: Other

CMM Computerized Manufacturing and Machining

CMM 110(3) **Course ID: 001812**
Fundamentals of Machine Tools - A
Provides the basic principles needed for a solid foundation in machine tool technology. Covers shop safety, bench work, drill press, power saw, measurement, and mills. Lecture:1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours/30:1 ratio).
Components: Laboratory, Lecture
Attributes: Technical

CMM 112(3) **Course ID: 001813**
Fundamentals of Machine Tools - B
Provides the basic principles needed for a solid foundation in machine tool technology. Includes shop safety, bench work, drill press, power saw, measurement, and lathes. Prerequisite: (CMM 110 with a grade of "C" or greater) or Consent of Instructor. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

CMM 114(6) **Course ID: 001814**
Fundamentals of Machine Tools
Provides the skills and knowledge that is needed to progress through the machine tool program. Includes safety and bench work. Introduces the basic power equipment and machine tools that are used in the machine trades which include: drill presses, power saws, measurement instruments, mills and lathes. Lecture: 1.0 credits (15 contact hours). Lab: 5.0 credits (150 contact hours/30:1 ratio).
Components: Laboratory, Lecture
Attributes: Technical

CMM 118(2) **Course ID: 001815**
Metrology/Control Charts
Provides the basic principles in using precision measurement instruments and their application to inspection and quality control. Lecture/Lab: 2.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CMM 120(3) **Course ID: 001816**
Applied Machining I
Consists of intermediate level skills using machining machines and surface grinders. Includes the selection of grinding wheels. Prerequisite: ((CMM 110 and 112) or (CMM 114) with a grade of "C" or greater) or Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours/30:1 ratio).
Components: Laboratory, Lecture
Attributes: Technical

CMM 122(3) **Course ID: 001817**
Applied Machining II
Carries the student to higher levels in the operation of machine tools. Prerequisite: (CMM 120 with a grade of "C" or greater) or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

CMM 124(6) **Course ID: 001818**
Applied Machining
Allows the student to begin performing skills that will combine the use of different types of machine and begin to give them a complete picture of the machine tool career. Prerequisite: ((CMM 110 and CMM 112) or (CMM 114) with a grade of "C" or greater) or Consent of Instructor. Lecture/Lab: 6.0 credits (165 contact hours).
Components: Lecture
Attributes: Technical

CMM 130(3) **Course ID: 001819**
Manual Programming
Introduces the student to CNC codes and programming, set-up and operation of CNC machine tools. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours/30:1 ratio).
Components: Laboratory, Lecture
Attributes: Technical

CMM 132(3) **Course ID: 001820**
CAD/CAM/CNC
Introduces the student to CAD/CAM/CNC systems which includes CAM software. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours/30:1 ratio).
Components: Laboratory, Lecture
Attributes: Technical

CMM 134(6) **Course ID: 001821**
Manual Programming CAD/CAM/CNC
Introduces the student to CAD/CAM/CNC systems, CNC format, the Cartesian Coordinate System, CNC codes and programming, set-up and operation of CNC machine tool. Prerequisite: ((CMM 110 and CMM 112) or CMM 114) with a grade of "C" or greater] or Consent of Instructor. Lecture: 2.0 credits (30 contact hours); Laboratory: 4.0 credits (120 contact hours/30:1 ratio).
Components: Laboratory, Lecture
Attributes: Technical

CMM 138(6) **Course ID: 006243**
Intro. to Programming & CNC Machines
Introduces CAD/CAM and CNC equipment. Covers program codes and set up operations used on a variety of machine tools including technologies like waterjet. Prerequisite: ((CMM 110 and CMM 112) or (CMM 114) with a grade of "C" or greater) or Consent of Instructor. Lecture/Lab: 6.0 credits (150 contact hours) (30:1 Ratio Lab).
Components: Lecture
Attributes: Technical

CMM 150(2) **Course ID: 005089**
Shop Theory
Covers shop theory, processes, and basic concepts of machine tool applications utilized in the tool and die field. Includes areas and machine concepts: safety, measurement, layout work, bench work, saws, drills, drilling machines, mills and lathes. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

CMM 151(3) **Course ID: 005090**
Machinery's Handbook and Metallurgy
Introduces the Machinery's Handbook as a reference source for solving manufacturing problems and provides a working knowledge of the principles and concepts contained in the Handbook. Explores processes involved in heat-treating steels to a specific hardness, toughness, wear capability. Covers the identification, classification, application, and processing of Tool Steels. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CMM 152(3) **Course ID: 005091**
Jigs, Fixtures and Gaging
Introduces jigs, fixtures and work holding devices, including separate uses and principles. Applies machining processes to design jigs and fixtures. Uses print knowledge to identify part datums for gaging points. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CMM 153(3) **Course ID: 005092**
Mold Theory
Presents mold-making including thermoplastic and thermosetting materials, compression mold, transfer mold, injection molds and mold components, the heating and cooling of molds and the methods of producing cores and cavities. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CMM 154(3) **Course ID: 005093**
Die Theory
Presents basic die making including die sets, punch presses, blanking dies, piercing dies, screw and dowell holes, punch and punch blocks, die life, bending dies, pilots, die block construction, stock strippers, stock guides, progressive dies, stock strips and secondary operations of notch, trim, and shave. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CMM 155(2) **Course ID: 005527**
Jigs, Fixtures and Gaging Lab
Provides practical experience in construction and application of jigs, fixtures and work holding devices. Includes applying metrology equipment to fixtures in part and stamping evaluation. Prerequisite: CMM 152. Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

CMM 160(4) **Course ID: 005355**
Basic Bench and Machine Processes
Provides skills and knowledge needed to progress through the machine tool program. Includes safety and bench work. Applies knowledge to a tool and die environment. Introduces the basic power equipment and machine tools used in a tool and die shop. Lab: 4.0 credits (120 contact hours).
Components: Laboratory
Attributes: Technical

CMM 210(3) **Course ID: 001822**
Industrial Machining I
Covers the classification of metals, identification of tool steels and their applications. Requires the student to perform advanced milling machine operations that simulate industry standards. Prerequisite: ((CMM 122 or 124) with a grade of "C" or greater) or Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours/30:1 ratio).
Components: Laboratory, Lecture
Attributes: Technical

CMM 212(3) **Course ID: 001823**
Industrial Machining II
Permits the student to receive instruction in any area where advanced work is needed or an area where there is student interest. Prerequisite: (CMM 210 with a grade of "C" or greater) or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

CMM 214(6) **Course ID: 001824**
Industrial Machining
Covers the classification of metals, identification of tool steels and their applications. Requires the student to perform advanced milling machine operations that simulate industry standards. Includes special projects in this course so the student will receive instruction in a specific area. Prerequisite: ((CMM 122 or CMM 124) with a grade of "C" or greater) or Consent of Instructor. Lecture/Lab: 6.0 credits (165 contact hours).
Components: Lecture
Attributes: Technical

CMM 218(8) **Course ID: 005530**
Advanced Machining Techniques for Manufacturing
Allows for construction of sinker electrodes in the production of die and mold forms. Includes wire electrodischarge machines (edm) machining of die sections, punch retainers, stripper plates, punch forms and use of cylindrical grinder ID and OD and angular grinding on die and mold components. Prerequisite: CMM 216 with a grade of "C" or greater. Lecture: 2.0 credits (30 contact hours). Laboratory: 6.0 credits (180 contact hours).
Components: Laboratory, Lecture

CMM 220(4) **Course ID: 001825**
Advanced Industrial Machining I
Allows for construction of electrodes and the production of parts by the use of an Electrical Discharge machine. (National Standards require EDM and cylindrical grinder training. Colleges lacking this equipment can only present theory only. KCTCS is presently trying to acquire EDM and cylindrical grinders.) Prerequisite: ((CMM 130 and CMM 132) or (CMM 134) and (CMM 212 or CMM 214) with a grade of "C" or greater) or Consent of Instructor. Laboratory: 4 credits (120 contact hours/30:1 ratio).
Components: Laboratory
Attributes: Technical

CMM 222(2) **Course ID: 001826**
Advanced Industrial Machining II
Advances students to a higher level of industrial standards by exposing them to additional tasks using a cylindrical grinder. **National Standards require EDM and cylindrical grinder training. Those programs lacking this equipment can only present theory. KCTCS is presently trying to acquire EDM and cylindrical. Prerequisite: (CMM 212 or CMM 214 with a Grade of "C" or greater) or Consent of Instructor. Lab: 2.0 credits (60 contact hours/30:1 ratio).
Components: Laboratory
Attributes: Technical

CMM 224(6) **Course ID: 001827**
Advanced Industrial Machining
Designed to allow for the construction of electrodes and the production of parts by the use of an Electric Discharge Machine (EDM), cylindrical grinder, and other type of grinders. **National Standards require EDM and cylindrical grinder training. Colleges lacking this equipment can only present theory. KCTCS is presently trying to acquire EDM and cylindrical grinders. Prerequisite: (CMM 134 and (CMM 212 or CMM 214) with a grade of "C" or greater) or Consent of Instructor. Laboratory: 6.0 credits (180 contact hours or 270 Clinical Contact).
Components: Laboratory
Attributes: Technical

CMM 230(6) **Course ID: 001828**
Instructor Consent Required
Conversational Programming
Introduces the student to conversational programming of CNC machine tools. Prerequisite: Consent of Instructor. Lecture/Lab: 6.0 credits (150 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CMM 234(6) **Course ID: 006244**
CNC Machines & Coding Practices
Introduces the student to conversational programming of CNC machine tools to include conversational setup and run options found on a CNC water jet machine. Prerequisite: ((CMM 130 and CMM 132) or (CMM 134 or CMM 138) with a grade of "C" or greater) or Consent of Instructor. Lecture/Lab: 6.0 credits (150 contact hours). (30:1 Ratio Lab).
Components: Lecture
Attributes: Technical

CMM 240(6) **Course ID: 001829**
Introduction to 3-D Programming
Introduces 3-D Programming using CAM systems to effect engineering changes that enhance productivity. Uses CAM system to create and produce complex 3-D parts. Prerequisite: ((CMM 130 and CMM 132) or (CMM 134 or CMM 138) with a grade of "C" or greater) or Consent of Instructor. Lecture: 2.0 credits (30 contact hours). Lab: 4.0 credits (120 contact hours or 180 clinical contact).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CMM 244(6) **Course ID: 006245**
Advance Programming/Setup Practices
Uses CAM systems to effect engineering changes that enhance productivity to create and produce complex shapes on the CNC mill, lathe, EDM and water jet machines. Prerequisite: ((CMM 2301 and CMM 2302) or (CMM 230) with a grade of "C" or greater) or consent of instructor. Lecture/Lab: 6.0 credits (150 contact hours).
Components: Lecture
Attributes: Technical

CMM 298(1) **Course ID: 001830**
Instructor Consent Required
Practicum
Provides supervised on-the-job work experience related to the student's educational objectives. (Students participating in the Practicum do not receive compensation.) Prerequisite: Permission of the Instructor. Practicum: 1.0 credit (75 contact hours).
Components: Practicum
Attributes: Technical

CMM 299(1) **Course ID: 001831**
Instructor Consent Required
Cooperative Education Program
Provides supervised on-the-job work experience related to the student's educational objectives. (Students participating in the coop do receive compensation.) Prerequisite: Permission of Instructor. Co-Op: 1.0 credit (75 contact hours).
Components: Co-Op
Attributes: Technical

CMM 2301(3) **Course ID: 005085**
Instructor Consent Required
Introduction to Conversational Programming
Introduces students to conversational programming guidelines which will include program preparation, conversational input, and minor editing. Prerequisite: Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Lecture

CMM 2302(3) **Course ID: 005086**
Conversational Editing and Subroutines
Introduces students to performing editing routines, to subroutines, and to programs that contain loops. Requires students to interpret error messages from the control. Prerequisite: CMM 2301 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Lecture

CMM 2401(3) **Course ID: 005087**
Introduction to 3D Code Sequencing and Tool Path Production
Introduces students to creation of 3-D models and allows use of those models to be used in creation of tool paths for CNC machine tools. Prerequisite: ((CMM 130 and CMM 132) or (CMM 134) with a grade of "C" or greater) or Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Lecture

CMM 2402(3) **Course ID: 005088**
Advanced 3D Code Sequencing and Macro Systems
Introduces 3-D Programming using CAM systems to effect engineering changes that enhance productivity. Uses the CAM system to create and produce complex 3-D parts. Prerequisite: ((CMM 130 and CMM 132) or (CMM 134 or CMM 138) and (CMM 2401) with a Grade of "C" or greater) or Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Lecture

CMS Communications

CMS 105(3) **Course ID: 000292**
Multimedia Production and Applications I
Students are introduced to the technologies and applications of multimedia systems including production, presentation, and transmission of video, voice, and data. Lecture: 2 hours; Laboratory: 2 hours.
Components: Laboratory, Lecture
Attributes: Technical

CMS 120(1) **Course ID: 000293**
Employability Skills Seminar
This course will focus on those skills necessary for job securement such as self-assessment, resume writing, interview techniques, job search, job marketing strategies, and desired attributes for on-the-job success. Lecture: 1 hour. Offered on a Pass/Fail basis only.
Components: Lecture
Attributes: Other

CMS 142(1 - 4) **Course ID: 000295**
Communications Practicum
Student works a minimum of two hours each week with the college newspaper. Practicum: 1-4 credit hours (30-120 contact hours). Course may be repeated for a total of 4 credit hours.
Components: Practicum
Attributes: Other

CMS 155(3) **Course ID: 006257**
Introduction to Broadcasting
Introduces the history of the broadcast media in the United States and to current operating practices including Internet distribution. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

CMS 157(3) **Course ID: 000300**
Basic Photography
Photographic techniques such as composition, lighting, exposure control, and skills needed by a photojournalist. Other topics may include using digital cameras, digital file formats, enhancing the digital image, and structuring the digital image. Lab component may include the use of a computer with photo imaging software and/or a darkroom using film cameras and enlargers. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture

CMS 266(3) **Course ID: 006258**
Basic Television Production
Introduces the principles and techniques of field and studio video production and provides practical application in general broadcast station operations. Lecture: 2.0 credits (30 contact hours), Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Other

COE Cooperative Education

COE 199(1 - 8) **Course ID: 000309**
Cooperative Education: (Associate in Applied Science Degree, Diplomas, and Certificate Programs)
Cooperative Education is a planned and evaluated work experience related to the student's educational objective for which the student receives both financial remuneration and academic credit. One credit hour is awarded for completion of additional required activities. While the maximum amount of credit granted for cooperative education experience varies by curriculum, the amount may never exceed eight hours in an Associate in Applied Science Degree, diploma or certificate program. This course is available only to students enrolled in Associate in Applied Science Degree, diploma and certificate program that list Cooperative Education as an approved course. Co-op: 1-8 hours. Prerequisite: Completion of at least 12 credit hours in the Associate in Applied Science Degree, diploma or certificate program of study and/or marketable skills in the area in which the student in enrolled, and minimum cumulative grade point average (GPA) of 2.0.
Components: Co-Op
Attributes: Technical

COED Cooperative Education

COED 198(1 - 9) **Course ID: 005265**
Instructor Consent Required
Practicum
Provides a planned and evaluated work experience related to the student's educational objective for which the student receives academic credit but no financial remuneration. Practicum: 1-9 credits (45-405 contact hours). Prerequisite: Consent of Instructor.
Components: Practicum
Attributes: Technical

COED 199(3) **Course ID: 001203**
Cooperative Education I
Cooperative education is a planned and evaluated work experience related to the students educational objective. The student receives both financial and remuneration and academic credit for this class. One credit hour is awarded for successful completion of 60 hours of approved work experience. Prerequisite/Corequisite: Permission of instructor
Components: Co-Op
Attributes: Technical

COM Communications

COM 101(3) **Course ID: 000310**
Introduction to Communications
Introduces the process of communication as a critical element in human interaction and in society. Enhances effective communication and informed use of the mass media. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

COM 181(3) **Course ID: 000311**
Basic Public Speaking
Applies the basic principles and techniques in research, organization, and delivery of speeches for informative and persuasive speaking purposes. Provides practical platform experience in developing speaking abilities to enable the student to communicate orally in clear, coherent language appropriate to the purpose, occasion, and audience. Prerequisite: Current KCTCS placement scores for college level reading and writing OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: OC - Oral Communication, Course Also Offered in Modules

COM 184(1) **Course ID: 000313**
Intercollegiate Debating
Preparation for and participation in intercollegiate debating. May be repeated to a maximum of two credits.
Components: Lecture
Attributes: Other

COM 205(3) **Course ID: 016093**
Business and Professional Communication
Provides opportunity to examine and develop oral communication strategies appropriate to business and professional environments. Includes oral presentations, interpersonal communication strategies, intercultural communication, interviewing, communicating in teams, leadership communication and conflict resolution skills. Does not substitute for COM 181 for Business transfer students. Pre-requisite: Current KCTCS placement scores for College level reading and writing, or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: OC - Oral Communication

COM 249(3) **Course ID: 000314**
Mass Media Communication
Examines mass media messages, audiences, technologies, and regulations in a global society. Pre-requisite: Current KCTCS placement scores for College level reading and writing, or Consent of Instructor.. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: SOC 249
Attributes: SB - Social Behavior Science

COM 252(3) **Course ID: 000315**
Introduction to Interpersonal Communication
Examines basic verbal and nonverbal concepts affecting the communication process in various interpersonal contexts. Requires participation in written and oral activities designed to develop and improve interpersonal skills. Includes perspective-taking, relationship and conversation management, effective listening, conflict management, communication climate, communication anxiety, and cultural/gender differences in interpersonal communication. Pre-requisite Or Co-requisite: Current KCTCS placement scores for college level reading and writing, or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: OC - Oral Communication, Course Also Offered in Modules

COM 254(3) **Course ID: 004552**
Introduction to Intercultural Communication
Introduces intercultural communication with an emphasis on the relationships between culture and communication, social/psychological variables, verbal/nonverbal language systems, intercultural communication perceptions, and conflict resolution. Includes the practical application of contemporary issues in cross-cultural interaction, media representation, and daily social interactions to intercultural communication concepts. Pre-requisite or Co-requisite: Current KCTCS placement scores for college level reading and writing, or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

COM 281(3) **Course ID: 000316**
Communication in Small Group
Examines communication processes in small group situations including conflict, leadership, and decision making. Includes participation in group discussion and the development of skills in analyzing group performance. Pre-requisite Or Co-requisite: Current KCTCS placement scores for college level reading and writing, or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: OC - Oral Communication

COM 284(1) **Course ID: 002198**
Intercollegiate Debating
Preparation for and participation in intercollegiate debating. May be repeated to a maximum of four credits.
Components: Lecture
Attributes: Other

COM 287(3) **Course ID: 000317**
Persuasive Speaking
Examines the processes involved in attitude change, with emphasis on the preparation and delivery of persuasive messages. Prerequisite: COM 181. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: OC - Oral Communication

COM 288(3) **Course ID: 000318**
Oral Interpretation
Analyzes prose and poetry for oral interpretation. Helpful to those who plan to teach in literature. Pre-requisite Or Co-requisite: Current KCTCS placement scores for college level reading and writing, or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

COM 299(3) **Course ID: 004257**
Special Topics in Communication
A sophomore level study of a selected topic in communication. Prerequisite: COM 181 or COM 252 or consent of instructor. Lecture: 3 hours.
Components: Lecture
Attributes: Other

COM 1811(1) **Course ID: 015806**
Public Speaking Essentials
Applies the basic principles and techniques in research, organization and delivery of speeches appropriate to the purpose, occasion, and audience. Pre-requisite: Current KCTCS placement scores for college level reading and writing OR Consent of Instructor. Lecture: 1.0 credit (15.0 contact hours).
Components: Lecture

COM 1812(1) **Course ID: 015807**
Basic Informative Speaking
Provides practical platform experience in developing speaking abilities to enable the student to communicate orally in clear, coherent language appropriate to the presentation of informative speeches. Pre-requisite: COM 1811. Lecture: 1.0 credit (15.0 contact hours)
Components: Lecture

COM 1813(1) **Course ID: 015808**
Basic Persuasive Speaking
Provides practical platform experience in developing speaking abilities to enable the student to communicate orally in clear, coherent language appropriate for the presentation of persuasive speeches. Pre-requisite: COM 1812. Lecture: 1.0 credit (15.0 contact hours).
Components: Lecture

COM 2051(1) **Course ID: 016231**
Communication Foundations
Demonstrates the role of oral communication in culturally diverse business and professional settings and develops an understanding of self-concept and perception/ impression management. Pre-requisite: Current KCTCS placement scores for college level Reading and Writing or Consent of Instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

COM 2052(1) **Course ID: 016232**
Communication In A Job Search
Provides experience in communication developing communication skills for use in technology-based job exploration with an emphasis on ethics, interviewing, active listening, and verbal and nonverbal communication for use in culturally diverse business and professional settings. Pre-requisite: COM 2051. Lecture: 1 credit (15 contact hours).
Components: Lecture

COM 2053(1) **Course ID: 016233**
Communication In Organizations
Provides experience in developing communication competence in leadership roles, conflict management, and effective, informative, and persuasive communication skills for use in culturally diverse business and professional settings. Pre-requisite: COM 2052. Lecture: 1 credit (15 contact hours)
Components: Lecture

COM 2521(1) **Course ID: 005800**
Looking In
Examines basic verbal and nonverbal concepts affecting the interpersonal process. Includes both verbal and nonverbal elements affecting communication between individuals in settings ranging from the family, peer groups, and work contexts. Pre-requisite Or Co-requisite: Current KCTCS placement scores for college level reading and writing, or consent of instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

COM 2522(1) **Course ID: 005801**
Communicating and Responding
Examines basic verbal and nonverbal concepts affecting the communication process in various interpersonal contexts. Topics include both verbal and nonverbal elements affecting communication between individuals in setting ranging from the family, peer groups, and work contexts. Prerequisite: COM 2521. Lecture: 1 credit (15 contact hours).
Components: Lecture

COM 2523(1) **Course ID: 005802**
Looking at Relational Dynamics
Examines basic verbal and nonverbal concepts affecting the communication process in various interpersonal contexts. Includes the basic needs in developing interpersonal relationship with emphasis on the types of relations and the components involved in such relationships including compliance-gaining and conflict resolution. Prerequisite: COM 2522. Lecture: 1 credit (15 contact hours).
Components: Lecture

COS Cosmetology

COS 105(14) Course ID: 005534
Esthetician I
Covers the history of esthetics, today's career opportunities, and professional image. Includes Kentucky Statutes and Regulations, analysis of skin types for facial products, massage techniques, and hair removal. Provides guidelines that prevent the contamination of products, implements, and equipment for the prevention of disease. Includes the study of structure, composition, and function of the skin. Prerequisite: (High school diploma or equivalent) and admission to esthetician program. Lecture/Lab: 14.0 credit hours (360 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

COS 114(14) Course ID: 001213
Cosmetology I, 6-1
This course is designed to cultivate proper attitude and behavior patterns needed to create a successful Cosmetologist. Kentucky Statutes and regulations, safety, bacteriology, sanitation, infection control, first aid treatment, structure and disorders of the nail are studied. An introduction to the basic fundamentals of hair, skin and nail care, hair styling and shaping, manicures and pedicures, chemical and thermal services, and wigs. The student in developing manipulative skills and practicing procedures utilizes mannequins and classmates. After 300 hours student begin to apply procedures on clients under the direct supervision of the instructor.
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

COS 116(14) Course ID: 001214
Cosmetology II, 6-2
A study of basic chemistry with emphasis placed on the physical and chemical properties of cosmetic materials. Electricity and light therapy are discussed and an in-depth study of anatomical structures affected by cosmetological services including disorders of the skin, scalp, hair, and nails. The instructor gives the students progressively more difficult assignments with close supervision.
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

COS 135(1 - 8) Course ID: 001223
Instructor Consent Required
Individual Requirements I
Provides additional lecture/laboratory time to meet licensure requirements of 1800 clock hours. Prerequisite: Consent of Instructor. Lecture: 1.0 - 8.0 credit hours (15 -120 contact hours). Laboratory: 1.0 - 8.0 credit hours (30 - 240 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

COS 150(13) Course ID: 001224
Basic Nail Tech
Provides knowledge of the art and science of nail technology including the rules and regulations of the State Board of Cosmetology as they apply to the salon. Includes bacteriology and infection control through the practice of sanitation procedures, the study of the cells, structure of the hand, arm, nail and their diseases and disorders, and the study of beauty salon management including the practice of interacting with clients, co-workers, and supervisors. (Students practice on classmates and progress to work on clients.) Lecture: 5 credits (75 contact hours). Laboratory: 8 credits (240 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

COS 152(13) Course ID: 001225
Applied Nail Technology
Continues the study of nail technology. Includes a comprehensive written and practical exam in preparation for state board licensure. Prerequisite: COS 150. Lecture: 5 credits (75 contact hours). Laboratory: 8 credits (240 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

COS 205(14) Course ID: 005540
Esthetician II
Covers organic/inorganic chemistry and cosmetic ingredients. Focuses on facial enhancements through the use of make-up artistry and application including hair removal procedures and applications. Includes the study of skin conditions, disorders and diseases, and those treatable by the esthetician. Explains treatments related to skin and skin disorders. Prerequisite: COS 105 or Consent of Instructor. Lecture/Lab: 14.0 credit hours (360 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

COS 210(13) Course ID: 001233
Student Teaching I
Introduces teaching methods used in training cosmetology and nail technology students. Inclusive of theory, class methods of lecture, media use and testing methods. Introduces methods used to teach the practical application of skills. Prerequisite: Cosmetologist's License; One year work experience, apprentice cosmetologists instructor's license. Lecture: 3 credits (45 contact hours). Laboratory: 10 credits (300 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

COS 212(13) Course ID: 001234
Student Teaching II
Expands the apprentice instructor's ability to apply various methods used to train cosmetology and nail technology students. Prerequisite: COS 210. Lecture: 3 credits (45 contact hours). Laboratory: 10 credits (300 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

COS 214(13) Course ID: 001235
Student Teaching III
Provides preparatory work to prepare the apprentice instructor for the Kentucky Board of Hairdressers instructor exam. Prerequisite: COS 212. Lecture: 3 credits (45 contact hours). Laboratory: 10 credit hours (300 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

COS 216(20) Course ID: 015567
Teaching I
Introduces teaching methods used in training cosmetology, esthetics, and nail technology students. Demonstrates teaching methods of theory, media use, and testing methods. Develops and applies the methods used to teach the practical application of skills. Pre-requisite: Cosmetologist's License, one year work experience, and Apprentice Cosmetologists Instructor's License. Lecture: 6.0 credits (90 contact hours). Lab: 14.0 credits (420 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

COS 217(20) Course ID: 015568
Teaching II
Expands teaching methods used in training cosmetology, esthetics, and nail technology students. Demonstrates advanced teaching methods of theory, media use, and testing methods. Develops and applies methods used to teach the practical application of skills. Provides preparatory work to prepare the apprentice instructor for the Kentucky Board of Hairdressers and Cosmetologist's instructor examination. Pre-requisite: COS 216. Lecture: 6.0 credits (90 contact hours). Lab: 14.0 contacts (420 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

COS 218(14) Course ID: 001215
Cosmetology III, 6-3
Provides knowledge of the structure and function of the human body, including the interaction of all the body systems in maintaining homeostasis. All phases of beauty salon management are studied, including interacting with clients, co-workers and supervisors. Laboratory experience is advanced with performance expectations set at a higher level.
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

COS 220(12) Course ID: 001216
Cosmetology IV, 6-4
This course is designed for a total review of the cosmetology curriculum. A comprehensive written and practical exam is given in preparation for the State Board Licensure exam. Students implement their own judgement of procedures and solutions to be used on clients with supervision.
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

COS 235(1 - 8) Course ID: 004413
Instructor Consent Required
Individual Requirements II
Provides additional lecture/laboratory time to meet licensure requirements of 1800 clock hours. Prerequisite: Consent of Instructor. Lecture/Lab: 1.0 - 8.0 credit hours (15 - 120 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

COS 275(13) Course ID: 005545
Esthetician III
Covers procedures for business and management, the practice of esthetic setup, sanitation, application techniques, advanced esthetics which include peels, deep pore cleansing, clinical skin care, aroma therapy, and spa/body treatments. Includes Kentucky Statutes and Regulations. Provides for the study of the functions and benefits of electrotherapy including pre- and post-operative care for physician treatments and the application of various cosmeceutical products. Prerequisite: (High school diploma or equivalent) and admission to esthetician program. Lecture/Lab: 13.0 credits (315 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

COS 1141(3) Course ID: 004994
Introduction to Cosmetology
An introduction to professionalism and communication. Topics include Kentucky Statutes and Regulations, safety and decontamination. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).
Components: Lecture

COS 1142(3) Course ID: 004995
Basics of Cosmetology
Provides fundamental principles and skills of manicures, pedicures, facials, and scalp and hair care. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).
Components: Lecture

COS 1143(3) Course ID: 004996
Principles of Hair Design
Provides design elements and principles of hairstyling. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).
Components: Laboratory, Lecture

COS 1144(1) Course ID: 004997
Cosmetology Skills A
Focus on developing design elements of hair. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

COS 1145(1) Course ID: 004998
Hair Structure, Disorders and Diseases
Focuses on the structure, diseases, and disorders of hair. Lecture: 1 credit (15 contact hours).
Components: Lecture

COS 1146(1) Course ID: 004999
Cosmetology Skills B
Provides basic principles of hair design and safety. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

COS 1147(1) Course ID: 005000
Nail Structure: Diseases and Disorders
Focuses on nail structure, diseases and disorders. Lecture: 1 credit (15 contact hours).
Components: Lecture

COS 1148(1) **Course ID: 005001**
Skin: Structure, Disorders and Diseases
Focuses on skin structure, diseases and disorders. Lecture: 1 credit (15 contact hours).
Components: Lecture

COS 1161(3) **Course ID: 005002**
Introduction to Cosmetic Chemistry
Basic study of cosmetic chemistry. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).
Components: Laboratory, Lecture

COS 1162(3) **Course ID: 005003**
Chemical Services
Basic chemical services. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).
Components: Laboratory, Lecture

COS 1163(3) **Course ID: 005004**
Massage Techniques
Study of massage techniques. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).
Components: Laboratory, Lecture

COS 1164(1) **Course ID: 005005**
Cosmetic Techniques Lab
Provides an opportunity to apply chemical services. Focuses on perms, color application and straightening of hair. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

COS 1165(1) **Course ID: 005006**
Electricity & Light Therapy for Cosmetology
Study of electricity and light therapy. Lecture: 1 credit (15 contact hours).
Components: Lecture

COS 1166(1) **Course ID: 005007**
Intermediate Hair Design Lab
Continues the application of hair design theory and skills. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

COS 1167(1) **Course ID: 005008**
Facials
Theory of facials. Lecture: 1 credit (15 contact hours).
Components: Lecture

COS 1168(1) **Course ID: 005009**
Makeup and Hair Removal
Provides the theoretical base for application of makeup. Hair removal principles and techniques. Lecture: 1 credit (15 contact hours).
Components: Lecture

COS 2181(3) **Course ID: 005010**
Anatomy for Cosmetology I
Study of the structures and functions of the human body. Application of these studies in cosmetology services. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).
Components: Laboratory, Lecture

COS 2182(3) **Course ID: 005011**
Anatomy for Cosmetology II
Study of the interaction of all body systems and the maintenance of homeostasis. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).
Components: Laboratory, Lecture

COS 2183(3) **Course ID: 005012**
Salon Management
The study and application of all phases of salon management. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).
Components: Laboratory, Lecture

COS 2184(1) **Course ID: 005013**
Intermediate Chemical Services Lab
The study of the interaction of all the body systems in maintaining homeostasis. Application of these studies in cosmetology services. Prerequisite: ((COS 1161 and COS 1162 and COS 1163 and COS 1164 and COS 1165 and COS 1166 and COS 1167 and COS 1168) or COS 116 with a grade of "C" or greater). Laboratory: 1 credit (45 contact hours).
Components: Laboratory

COS 2185(1) **Course ID: 005014**
Hair Enhancements
Study of artificial hair. Lecture: 1 credit (15 contact hours).
Components: Lecture

COS 2186(1) **Course ID: 005015**
Client Services Lab
Provides the student with the opportunity to demonstrate client services. Emphasis is on communication and positive public relation techniques. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

COS 2187(1) **Course ID: 005016**
Intermediate Hair Shaping
Hair shaping techniques for the intermediate practitioner. Lecture: 1 credit (15 contact hours).
Components: Lecture

COS 2188(1) **Course ID: 005017**
Cosmetology Trends and Issues
Trends and issues of cosmetology are covered. Lecture: 1 credit (15 contact hours).
Components: Lecture

CPR Cardiopulmonary Resuscitation

CPR 100(1) **Course ID: 001239**
CPR for Healthcare Professionals
Cardiopulmonary resuscitation (Adult/Infant/Child) is a course designed to teach current emergency techniques relative to cardiac and/or respiratory arrest, as put forth by the American Heart Association, National Safety Council or American Red Cross. The American Heart Association, National Safety Council or American Red Cross standardized course qualifies a student for certification of cardiopulmonary resuscitation.
Components: Lecture
Attributes: Technical

CRA Building Controls Technician

CRA 230(5) **Course ID: 016091**
Building Controls I
Develops techniques for servicing, troubleshooting, and performing necessary maintenance on modern building control system devices. Emphasizes electrical and mechanical safety. Covers equipment used in building control systems. Pre-requisite: ACR 100 and (ACR 102 or comparable electrical course) and 10 semester credit hours of Building Controls Technician technical electives or consent of instructor. Lecture/Lab: 5.0 credits (105 contact hours)
Components: Lecture
Attributes: Technical

CRA 232(5) **Course ID: 016092**
Building Controls II
Develops techniques for configuring, tuning and troubleshooting a networked building control system. Covers networked field equipment and central computer-controlled building control systems. Pre-requisite: CRA 230 or content of instructor. Lecture/Lab: 5.0 credits (105 contact hours).
Components: Lecture
Attributes: Technical

CRJ Criminal Justice

CRJ 100(3) **Course ID: 004191**
Introduction to Criminal Justice
Provides an introduction to the philosophical and historical background of agencies of the criminal justice systems, processes, purposes and functions. Includes an evaluation of the criminal justice system today, including trends and career orientation. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credit hours (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 102(3) **Course ID: 004192**
Introduction to Corrections
Provides an introduction to the development of correctional systems, and the processes, procedures, and issues of current correctional systems, both juvenile and adult. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credit hours (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 107(1) **Course ID: 004194**
Introduction to Firearms
Provides a working knowledge of the use, care, and safety of firearms. The course is of nomenclature design and it will be at the discretion of each individual college whether live ammunition will be utilized by the students and faculty to demonstrate the firing of weapons and marksmanship practice. Pre-requisite:(Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

CRJ 108(4) **Course ID: 007357**
Advanced Firearms and Less Than Lethal Weapons
Provides an advanced working knowledge of the use, care, safety, and legal application of firearms and less than lethal weapons. Includes live fire with the use of pistol, shotgun/rifle, and less than lethal weapons. Pre-requisite: CRJ 107 and (Current placement scores for RDG 030 or higher or completion of RDG 020) and (Current placement for ENC 091 or higher or completion of ENC 090). Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (69 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CRJ 110(3) **Course ID: 004195**
Principles of Asset Protection
Provides an introductory understanding of private security procedures. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 201(3) **Course ID: 000899**
Introduction to Criminalistics
Provides a basic knowledge of crime scene protection, collection, preservation, and identification of evidence, including proper search, dusting latent prints, casting fingerprint classification, and use of crime laboratory in crime detection and prosecution. Pre-requisite:(Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 202(3) **Course ID: 004196**
Issues and Ethics in Criminal Justice
Provides an understanding of the issues and ethical dilemmas confronting practitioners within the criminal justice system. Prerequisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 203(3) **Course ID: 004197**
Community Corrections: Probations & Parole
Provides an in-depth study of the history and current processes and procedures of probation, parole, and intermediate sanctions that makes up community corrections. Prerequisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 204(3) Course ID: 004198
Criminal Investigations
Provides the fundamentals of crime scene investigations, which includes searching and recording of the scene, collection and preservation of physical evidence, interviews and interrogation of victims, witnesses, and suspects, report writing and case preparation. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 208(3) Course ID: 004199
Delinquency and the Juvenile Justice System
Provides an introduction of the origins and theories associated with juvenile delinquency, and a comprehensive analysis of environmental issues that influence delinquency, plus a thorough overview of the juvenile justice system processes. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 210(3) Course ID: 004200
Physical Security Technology & Systems
Introduces facility security with the use of environmental design and integrated electronic technology (cameras, monitors, and alarms). Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 211(3) Course ID: 004201
Liability & Legal Issues
Provides an overview of legal aspects of security, which includes but is not limited to civil and criminal law, liability of asset protection, use of force, false imprisonment, negligent security, and invasion of privacy. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090) AND (CRJ 100 or Consent of Instructor). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 215(3) Course ID: 004202
Introduction to Law Enforcement
Provides an introduction to the study of law enforcement. Introduces the historical developments of law enforcement, police operations and programs. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 216(3) Course ID: 004203
Criminal Law
Provides an overview of the definitions and functional components of criminal law in the field of criminal justice. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 217(3) Course ID: 004204
Criminal Procedures
Provides an overview of the different criminal procedural laws by examining the specific Amendments that outline the guidelines of the administration of substantive laws. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 218(3) Course ID: 004193
Police Supervision
Provides an overview of the administrative, supervisory, and leadership roles that are required within a law enforcement agency. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090) AND CRJ 100 or CRJ 215 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 219(4) Course ID: 007358
Police Recruit Defensive Tactics
Provides the proper methods of police defensive tactics, emphasizes necessary skills, and establishes an understanding of use of force policies and legal implications. Pre-requisite: CRJ 215 and (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement for ENC 091 or higher or completion of ENC 090). Lecture: 1.0 credit (15 contact hours). Lab: 3.0 credits (91.5 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CRJ 220(3) Course ID: 005220
Introduction to Computer Forensics for Criminal Justice
Introduces the study of cybercrime with an emphasis on planning, detection, and response with the goals of counteracting and overcoming hacker attacks and computer-related offenses. Malicious activities will be logged and forensic tools will be used to gather court-admissible evidence. Prerequisite: Completion of an approved Computer Literacy Course with a grade of "C" or greater, or computer literacy demonstrated by competency exam; AND (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 222(3) Course ID: 004205
Prison & Jail Administration
Introduces the correctional procedures and administration of jails and prisons by focusing on historical and current perspectives of penology, administrative responsibilities of correctional leaders, and correctional staff responsibilities. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 224(4) Course ID: 007359
Basic Traffic Collision Investigation
Introduces basic vehicle collision investigation, from a law enforcement perspective, and entails evidence and investigation techniques and mathematical calculations. Pre-requisite: CRJ 204 and MAT 110 and (Current placement scores for RDG 030 or higher or completion of RDG 020) and (Current placement for ENC 091 or higher or completion of ENC 090). Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CRJ 225(4) Course ID: 007360
Driving and Traffic Enforcement for Law Enforcement
Provides an understanding of vehicle offenses, tactical police driving, and traffic stops, in a scenario-based environment that demonstrates applied skills. Pre-requisite: CRJ 215 and (Current placement scores for RDG 030 or higher or completion of RDG 020) and (Current placement for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contacts). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CRJ 230(3) Course ID: 006233
Criminal Justice Courtroom Procedures
Covers research, study, and discussion of current and emerging topics, issues, and trends in courtroom procedures. Includes basic courtroom procedures and the roles of the key personnel within the courtroom setting. Includes practical preparation procedures for witness presentation of testimony. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 231(3) Course ID: 006234
Legal Aspects of Corrections
Covers research, study, and discussion of current and emerging topics, issues, and trends in corrections. Introduces legal aspects of corrections. Includes a historical perspective, as well as applicable case law, in the areas of corrections operations, practices, and procedures. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 240(3) Course ID: 006102
Introduction to Corporate & Industrial Security
Includes research, study, and discussion of current and emerging topics, issues, and trends in corporate and industrial security. Covers basic corporate and industrial security procedures and the roles of the key personnel within the private security arena. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 245(3) Course ID: 006232
Introduction to Business and Industrial Fraud
Includes research, study, and discussion of current and emerging topics, issues and trends in business and industrial fraud. Covers basic concepts of occupational fraud and abuse and the roles of the key personnel within the criminal justice system. Includes practical procedures for defining, identifying, and investigating business and industrial fraud. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 277(3) Course ID: 006804
Introduction to Criminology
Provides an introduction to the understanding of criminal behavior by focusing on crime trends and patterns, the amount of crime, and the theories of crime. Theories of crime will include the biological, psychological, sociological, and integrated explanations of behavior. Theories of crime will be utilized to address the procedures and administration of criminal justice in society. Pre-requisite: If yes, list: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 279(3) **Course ID: 005781**
Terrorism and Political Violence
Provides an introduction to the study of terrorism and terrorist organizations. Introduces the student to the diverse definitions of terrorism and the social and political consequences of varying definitions, behavioral aspects of terrorist and the various justifications for terrorist activities. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 290(3) **Course ID: 004206**
Internship in Criminal Justice
Allows the criminal justice student the opportunity to broaden their educational experience through observation and work assignments at a recognized criminal justice agency. Prerequisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090) AND Sophomore Standing and completion of at least 12 semester hours of Criminal Justice work. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 295(1) **Course ID: 015650**
Criminal Justice Capstone
Serves as the capstone course for the Criminal Justice degree program. Integrates prior learning outcomes into a single integrated learning experience. Includes preparation for and completion of the post exit exam that all program graduates must complete. Pre-requisite: (CRJ 100 and CRJ 202 and CRJ 204 and CRJ 216 and CRJ 217) AND/ OR consent of Program Coordinator. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

CRJ 296(3) **Course ID: 016629**
Criminal Psychology
Provides a basic understanding of the psychological theories explaining criminal behavior. Includes topics regarding the effects of the brain's structural and functional processes on behavior, evidence based psychological techniques for treating criminal behavior, behavioral profiling, basic overview of common mental health problems, ways of recognizing mental health issues when dealing with offenders, and proven psychological techniques for calming problem situations thereby creating a safer and more efficient solution. Pre-requisite: CRJ 100, PSY 110. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CRJ 299(1 - 3) **Course ID: 004207**
Instructor Consent Required
Selected Topics in Criminal Justice
Introduces specialized topics in the field of criminal justice to meet current trends and investigations of contemporary topics in the discipline. The topics of the course and the number of credit hours determined are at the discretion of the instructor and college providing the course. This course may be repeated to a maximum of 6 credit hours. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 1.0 - 3.0 credits (15 - 45 contact hours).
Components: Lecture
Attributes: Technical

CRT Auto Body Repair

CRT 100(2) **Course ID: 000928**
Introduction to Collision Repair
Introduces the student to safety, sanding, grinding, pulling, roughing and filling: the use of tools and equipment; and preparing and priming automotive panels through lectures and demonstration. Lecture: 2.0 (30 contact hours).
Components: Lecture
Attributes: Technical

CRT 130(6) **Course ID: 000929**
Non-Structural Analysis and Damage Repair
Provides instruction in the replacement and alignment of bolts on automotive parts such as doors, hood, and fenders; as well as instruction on the repair and replacement of non-structural weld-on automotive panels by aligning, welding, cutting and drilling through demonstrations and lectures. Includes instruction on how to repair plastic, fiberglass, SMC and flexible automobile parts. Lecture: 6.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CRT 131(6) **Course ID: 002345**
Non-Structural Analysis and Damage Repair Lab
Provides practical experience in the replacement and alignment of bolts on automotive parts such as doors, hood, and fenders; as well as instruction on the repair and replacement of non-structural weld-on automotive panels by aligning, welding, cutting and drilling. Includes instruction on how to repair plastic, fiberglass, SMC and flexible automobile parts. Requires skills that are most effectively taught and practiced on live work; the exact content will be influenced by the live work available. Pre-requisite Or Co-requisite: CRT 130. Lab: 6.0 credits (180 - 270 contact hours).
Components: Laboratory
Attributes: Technical

CRT 150(6) **Course ID: 000931**
Painting and Refinishing
Provides instruction in the use of lacquer, acrylic enamel and base coat/clear coat refinishing products, masking procedures, preparations and paint problems. Lecture: 6.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CRT 151(6) **Course ID: 000932**
Painting and Refinishing Lab
Provides instruction in the use of lacquer, acrylic enamel and base coat/clear coat refinishing products, masking procedures, preparations and paint problems.(The auto and/or autos being used for live work will determine exact content.) Pre-requisite Or Co-requisite: CRT 150. Lab: 6.0 credits (180 -270 contact hours).
Components: Laboratory
Attributes: Technical

CRT 198(1 - 8) **Course ID: 000934**
Instructor Consent Required
Practicum
Provides supervised on-the-job work experience related to the students' education objectives. (Students participating in the practicum do not receive compensation. May be taken for 1-8 credits.) Prerequisite: Consent of Instructor. Practicum: 1.0 - 8.0 credit hours.
Components: Practicum

CRT 199(1 - 8) **Course ID: 000933**
Instructor Consent Required
Cooperative Education
Provides supervised on-the-job work experience related to the students' educational objectives. (Students participating in the Co-op Education program receive compensation for their work. May be taken for 1 - 8 credits.) Prerequisite: Consent of Instructor. Co-Op: 1.0 - 8.0 credit hours.
Components: Co-Op
Attributes: Technical

CRT 230(6) **Course ID: 000936**
Structural Analysis and Damage Repair
Presents instruction on the analysis, repair and replacement of structural panels on unibody automobiles and body and frame alignment on unibody and frame cars. Lecture: 6.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CRT 231(6) **Course ID: 000937**
Structural Analysis and Damage Repair Lab
Presents instruction on the analysis, repair and replacement of structural panels on unibody automobiles and body and frame alignment on unibody and frame cars. Pre-requisite Or Co-requisite: CRT 230. Lab: 6.0 credits (180 - 270 contact hours).
Components: Laboratory
Attributes: Technical

CRT 250(6) **Course ID: 000938**
Mechanical and Electrical Components
Provides instruction in the diagnosis, repair, and/or replacement of suspension, steering, electrical, brake, drive train, fuel, exhaust, and restraint systems. Includes theories and concepts of heating and air conditioning systems. Lecture: 6.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CRT 251(6) **Course ID: 000939**
Mechanical and Electrical Components Lab
Provides practical experience in the diagnosis, repair, and/ or replacement of suspension, steering, electrical, brake, drive train, fuel, exhaust, and restraint systems. Includes demonstration of theories and concepts of heating and air conditioning systems. Involves live work on automobiles. Pre-requisite Or Co-requisite: CRT 250. Lab: 6.0 credits (180 - 270 contact hours).
Components: Laboratory
Attributes: Technical

CRT 291(1) **Course ID: 000940**
Special Projects I
Designed for students to satisfactorily complete collision repair tasks or to enhance their skills in the occupational area. Prerequisite: Consent of Instructor. Lab: 1.0 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

CRT 293(2) **Course ID: 000941**
Special Projects II
Designed for students to satisfactorily complete collision repair tasks or to enhance their skills in the occupational area. Prerequisite: Consent of Instructor. Lab: 2.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

CRT 295(3) **Course ID: 000942**
Special Projects III
Designed for students to satisfactorily complete collision repair tasks or to enhance their skills in the occupational area. Prerequisite: Consent of Instructor. Lab: 3.0 credits (135 contact hours).
Components: Laboratory
Attributes: Technical

CRT 298(2) **Course ID: 000943**
Instructor Consent Required
Advanced Practicum
Provides supervised on-the-job work experience related to the students' education objectives. (Students participating in the practicum do not receive compensation.) Prerequisite: Consent of Instructor. Independent Study: 2.0 credits (150 contact hours).
Components: Independent Study
Attributes: Technical

CRT 299(2) **Course ID: 000944**
Instructor Consent Required
Advanced Cooperative Education
Provides supervised on-the-job work experience related to the students' educational objectives. (Students participating in the Co-op Education program receive compensation for their work.) Prerequisite: Consent of Instructor. Co-Op: 2.0 credits (150 contact hours).
Components: Co-Op
Attributes: Technical

CS Computer Science

CS 115(3) **Course ID: 000321**
Introduction to Computer Programming
This course teaches introductory skills in computer programming using a high-level computer programming language. There is an emphasis on both the principles and practice of computer programming. Covers principles of problem solving by computer and requires completion of a number of programming assignments. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: University Course (University of Kentucky)

CS 215(4) **Course ID: 007198**
Introduction to Program Design, Abstraction, and Problem Solving
The course covers introductory object-oriented problem solving, design, and programming engineering. Fundamentals elements of data structures and algorithm design will be addressed. An equally balanced effort will be devoted to the three main threads in the course: concepts, programming language skills, and rudiments of object-oriented programming and software engineering. Pre-requisites: CS 115, 221 or equivalent. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: University Course (University of Kentucky)

CS 216(3) **Course ID: 000323**
Introduction to Software Engineering
Software engineering topics to include: life cycles, metrics, requirements specifications, design methodologies, validation and verification, testing, reliability and project planning. Implementation of large programming projects using object-oriented design techniques and software tools in a modern development environment will be stressed. Lecture: 3 hours. Prerequisite: CS 215.
Components: Lecture

CS 216(3) **Course ID: 007199**
Introduction to Software Engineering
Software engineering topics include: life cycles, metrics, requirements specifications, design methodologies, validation and verification, testing, reliability and project planning. Implementation of large programming projects using object-oriented design techniques and software tools in a modern development environment will be stressed. Pre-requisites: CS215. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: University Course (University of Kentucky)

CS 221(2) **Course ID: 000325**
First Course in Computer Science for Engineers
Characteristics of a procedure-oriented language; description of a computer as to internal structure and the representation of information; introduction to algorithms. Emphasis will be placed on the solution of characteristic problems arising in engineering. Prerequisite: Not open for students who have received credit for CS115. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: University Course (University of Kentucky)

CS 261(3) **Course ID: 016137**
Social Networks: Methods and Tools
The complex connectedness of the modern society is a multifaceted phenomenon resulting from the growing density of the human population, the advent of fast global mass transportation infrastructure, the emergence of global companies and markets, and spurred by the Internet and its applications such as the Web, Facebook and Twitter. In this course, we learn about graph theory, game theory and computational tools required to model and analyze social networks, matching markets, web search, network externalities, tipping points, information cascades, epidemics, small worlds, and voting schemes. The course requires no programming background and has no university-level prerequisites. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: University Course (University of Kentucky)

CS 275(4) **Course ID: 007200**
Discrete Mathematics
Topics in discrete math aimed at applications in Computer Science. Fundamental principles: set theory, induction, relations, functions, Boolean algebra. Techniques of counting: permutations, combinations, recurrences, algorithms to generate them. Introduction to graphs and trees. Pre-requisites: MA 113 and CS 115.
Components: Lecture
Attributes: University Course (University of Kentucky)

CUL Culinary Arts

CUL 100(2) **Course ID: 004209**
Introduction to Culinary Arts
Provides an introduction to several aspects of the food industry. Includes an overview of the history of the profession and current career opportunities and trends. Introduces proper terminology for various types of equipment and cooking methods. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

CUL 105(2) **Course ID: 004210**
Applied Introduction to Culinary Arts
Provides an applied introduction to several aspects of the food industry. Includes an overview of the history of the profession and current career opportunities and trends. Introduces proper terminology for various types of equipment and cooking methods in a laboratory setting. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CUL 125(2) **Course ID: 004212**
Sanitation and Safety
Develops an understanding of the basic principles of sanitation and safety and to be able to apply them in the food service operations. Reinforces personal hygiene habits and food handling practices that protect the health of the consumer. Lecture 2 credits (30 contact hours)
Components: Lecture
Attributes: Technical

CUL 211(4) **Course ID: 004213**
Basic Food Production
This course provides a study of the basic principles of food selection, storage, and preparation, identification and classification of fruits and vegetables; preparation of stocks, soups and sauces; basic principles of cooking; baking; kitchen operations; and a study of breakfast food. Prerequisite or Corequisite: (CUL 100 and CUL 200) or consent of instructor.
Components: Laboratory, Lecture
Attributes: Technical

CUL 215(4) **Course ID: 004214**
Basic Baking
Applies fundamentals of baking science to preparation of a variety of products and to learn use and care of equipment in bake shop and/or baking area. Prerequisite or corequisite: CUL 100 or CUL 200 or consent of instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CUL 220(4) **Course ID: 004215**
Advanced Baking & Pastry Arts
Applies fundamentals of baking science to the preparation of a variety of baked products including choux paste, frozen desserts, and creams, custards, and related sauces. Emphasis will be placed on nutritional aspects of baked products and finishing techniques. Prerequisite: CUL 215. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CUL 225(4) **Course ID: 005137**
Professional Confection and Pastry Arts
Finishing techniques for confections and pastries, creating decorative centerpieces, sugar artistry, and cake decorating. Fundamentals of baking science along with advanced finishing techniques. Prerequisite: CUL 215. Lecture: 2 credits (30 contact hours); Laboratory: 2 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CUL 230(3) **Course ID: 004216**
Basic Nutrition
Describes the characteristics, functions, and food sources of the major nutrients and how to maximize nutrient retention in food preparation and storage. Applies the principles of nutrient needs throughout the life cycle through menu planning and preparation for specialty diets. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CUL 240(4) **Course ID: 004217**
Meats, Seafood, & Poultry
This course focuses on the identification of various cooking techniques for and the preparation of meats, seafood, and poultry. Prerequisite: CUL 100 and CUL 200. Prerequisite or Corequisite: CUL 211 or consent of the instructor. Lecture/Lab: 4 credits (90 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CUL 250(4) **Course ID: 004211**
Garde Manger
This course includes the production of hot and cold sandwiches, hors d'eouvre, canapes and salads. Garnishing techniques along with cold food production are discussed. Decorative skills as related to buffets and exhibits are explored. Corequisite: CUL 100 or Consent of instructor.
Components: Laboratory, Lecture
Attributes: Technical

CUL 260(4) **Course ID: 004218**
International & Classical Cuisine
This course focuses on the study and preparation of international and classical cuisine. Prerequisite: CUL 100 and CUL 200. Prerequisite or corequisite: (CUL 111 and CUL 211 and CUL 215 and CUL 240) or consent of instructor. Lecture/Lab: 4 credits (90 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CUL 270(3) **Course ID: 004219**
Human Relations Management
This course provides information necessary for the transition from student to a supervisory role in the Food and Beverage industry. Styles of leadership and skill development in human relations and personnel management are also covered. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CUL 280(3) **Course ID: 004221**
Cost and Control
Provides students with the opportunity to perform business and math skills using mathematical functions related to food service operations in the areas of cost, control , purchasing and receiving. Pre-requisite: A mathematics placement score above the score range for MAT 065 or successful completion of the prescribed developmental course(s) or consent of the instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CUL 285(3) **Course ID: 004222**
Front of the House
Focuses on the operations in front of the house management including service techniques and dining room service, beverage service (non-alcoholic and alcoholic beverages), POS systems, and menu planning. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CUL 290(4) **Course ID: 004223**
Front of the House-Catering
Focuses on the operations in front of the house management including service techniques and dining room service, beverage service (non-alcoholic and alcoholic beverages), POS systems, and menu planning. Prerequisite: (CUL 100 and CUL 111 and CUL 200 and CUL 211 and CUL 215 and CUL 240) or consent of the instructor. Lecture/Laboratory: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CUL 295(3) **Course ID: 005138**
Doing Business as a Personal Chef
A general overview of the business aspects of starting and operating a personal chef service. Prerequisite: All Technical Core Courses as outlined in the current Culinary Arts Curriculum. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CUL 297(1 - 6) **Course ID: 004224**
Selected Topics in Culinary Arts
Various culinary arts topics, issues, and trends will be addressed. Topics may vary from semester to semester at the discretion of the instructors; courses may be repeated with different topics to a maximum of six credits. Lecture: varies by topic; Lab: varies by topic. Prerequisite: Consent of instructor.
Components: Laboratory, Lecture
Attributes: Technical

CUL 298(2 - 3) **Course ID: 004225**
Culinary Arts Practicum Experience
Practicum enhances the student's transition from class to the work of work by providing unpaid work experience in a simulated or on-campus setting that utilizes the skills required to achieve the student's occupational goal. Prerequisite: Consent of instructor. Practicum: 2.0 - 3.0 credits (120-180 contact hours)
Components: Practicum
Attributes: Technical

CUL 299(2 - 3) **Course ID: 004226**
Culinary Arts Cooperative Education Experience
Enhances the student's transition from class to the workforce by providing a paid work experience in a setting that utilizes the skills required to achieve the student's occupational goal. Prerequisite: Consent of instructor. Practicum: 2.0 -3.0 credits (120 -180 contact hours).
Components: Practicum
Attributes: Technical

CUL 1001(1) **Course ID: 016347**
Culinary Industry Trends
Provides an introduction to several aspects of the food industry. Includes an overview of the history of the profession and current career opportunities and trends. Lecture: 1 credit (15 contact hours).
Components: Lecture

CUL 1002(1) **Course ID: 016348**
Culinary Arts Terminology
Provides an introduction to several aspects of the food industry. Introduces proper terminology for various types of equipment and cooking methods. Pre-requisite: CUL 1001. Lecture: 1 credit (15 contact hours).
Components: Lecture

CUL 1251(1) **Course ID: 016349**
Food Handling Practices
Reinforce personal hygiene habits and food handling practices that protect the health of the consumer. Lecture: 1 credit (15 contact hours).
Components: Lecture

CUL 1252(1) **Course ID: 016350**
Food Service Sanitation/Safety
Develops an understanding of the basic principles of sanitation and safety and applies them in the food service operations. Pre-requisite: CUL 1251. Lecture: 1 credit (15 contact hours).
Components: Lecture

CUL 2301(1) **Course ID: 016351**
Food and Nutrient Sources
Describes the characteristics, functions, and food sources of the major nutrients. Lecture: 1 credit (15 contact hours).
Components: Lecture

CUL 2302(1) **Course ID: 016352**
Menu Planning and Preparation
Describes how to maximize nutrient retention in food preparation and storage. Pre-requisite: CUL 2301. Lecture: 1 credit (15 contact hours)
Components: Lecture

CUL 2303(1) **Course ID: 016353**
Menus for Specialty Diets
Applies the principles of nutrient needs throughout the life cycle through menu planning and preparation for specialty diets. Pre-requisite: CUL 2302. Lecture: 1 credit (15 contact hours).
Components: Lecture

CUL 2801(1) **Course ID: 016354**
Food Service Operating Cost
Provides students with the opportunity to perform business and math skills using mathematical functions related to food service operations in the area of cost. Pre-requisite: A mathematics placement score above the score range for MAT 065 or successful completion of the prescribed developmental course(s) or consent of the instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

CUL 2802(1) **Course ID: 016355**
Food Service Control Costs
Provides students with the opportunity to perform business and math skills using mathematical functions related to food service operations in the area of control. Pre-requisite: CUL 2801. Lecture: 1 credit (15 contact hours)
Components: Lecture

CUL 2803(1) **Course ID: 016356**
Food Service Financial Aspects
Provides students with the opportunity to perform business and math skills using mathematical functions related to food service operations in the areas of purchasing and receiving. Pre-requisite: CUL 2802. Lecture: 1 credit (15 contact hours).
Components: Lecture

DAH Dental Hygiene

DAH 101(2) **Course ID: 000330**
Infection Control & Medical Emergencies
Examines current regulatory mandates, specific step-by-step procedures related to infection control, management of hazardous materials in the dental office, management of emergency situations and basic concepts of pharmacology. Pre-requisite: Admission into the Integrated Dental Assisting or Dental Hygiene Program. Lecture: 1.5 credits (22.5 contact hours). Lab: 0.5 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DAH 121(3) **Course ID: 000333**
Dental Sciences
Examines oral histology and embryology, head and neck anatomy, and tooth morphology as applicable to the practice of dental assisting and dental hygiene. Prerequisite: Admission into the Integrated Dental Assisting or Dental Hygiene Program. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DAH 124(2) **Course ID: 000335**
Materials In Dentistry
Examines the physical and chemical properties of dental materials with an emphasis on composition and application. Prerequisite: Admission into the Integrated Dental Assisting or Dental Hygiene Program. Lecture: 1.5 credits (22.5 contact hours). Lab: 0.5 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DAH 131(3) **Course ID: 004337**
Oral Pathology
Introduces the disciplines of general pathology and oral pathology as related to dental auxiliary function. Prerequisite: Dental Assisting: Minimum grade of "C" in DAH 101, DAH 121, DAH 124, DAH 135, DAS 125, and DAS 130; Dental Hygiene: Minimum grade of "C" in DAH 101, DAH 121, DAH 124, DAH 135, and DHG 120. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DAH 135(2) **Course ID: 000334**
Oral Radiology
Examines theory and clinical practice of oral radiographic methods. Presents history and development of x-radiation; properties and uses of x-radiation; radiation hygiene; exposing, processing and mounting of intraoral and extraoral films; and identification of radiographic anatomic landmarks. Prerequisite: Admission into the Integrated Dental Assisting or Dental Hygiene Program. Lecture: 1.5 credits (22.5 contact hours). Lab: 0.5 credits (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DAH 235(1) **Course ID: 000336**
Practice Management
Examines legal, ethical, and managerial aspects of the dental practice. Prerequisite: Dental Assisting: Minimum grade of "C" in DAH 101, DAH 121, DAH 135, DAH 124, DAS 125 and DAS 130; Dental Hygiene: Minimum grade of "C" in DHG 220 and DHG 226. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

DAS Dental Assisting

DAS 125(6) **Course ID: 015651**
Dental Assisting I
Introduces the profession of dental assisting, history of dentistry, chairside dental assisting, dental equipment, operative dentistry and dental specialties. Emphasizes essential dental assisting skills to prepare the student for clinical setting. Pre-requisite: Admission into the Dental Assisting Integrated program. Lecture: 2.0 (30 contact hours). Lab: 4.0 credits (120 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DAS 130(2) **Course ID: 006812**
Seminar I
Emphasizes leadership, management, clinical decision-making, judgment skills and professional values to facilitate the transition of the student to a professional dental assistant. Provides the opportunity for the application of critical thinking skills in the care of a diverse patient population in the dental setting. Pre-requisite: Admission into the Dental Assisting Integrated program. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DAS 225(2) **Course ID: 015652**
Dental Assisting II
Continues DAS 120 concepts. Introduces student to remaining dental specialties and expanded dental assisting functions. Pre-requisite: Dental Assisting: Minimum grade of C in DAH 101, DAH 121, DAH 124, DAH 135, DAS 125, and DAS 130. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DAS 230(1) **Course ID: 006813**
Seminar II
Provides the opportunity to discuss clinical experiences and prepare to sit for the Dental Assisting National Board (DANB). Provides students the opportunity to further develop professional growth plan. Pre-requisite: Minimum grade of "C" in DAH 101, DAH 121, DAH 124, DAH 135, DAS 125, and DAS 130. Lecture: 1.0 credit hour (15 contact hours).
Components: Lecture
Attributes: Technical

DAS 245(2) **Course ID: 015653**
Preventive Dentistry
Introduces dental biofilm and its role in dental disease. Emphasizes the role nutrition plays regarding disease initiation and progression and the methods and preventive agents utilized by the auxiliary to prevent oral disease. Pre-requisite: Dental Assisting: Minimum grade of C in DAH 101, DAH 121, DAH 124, DAH 135, DAS 125, and DAS 130. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DAS 250(5) **Course ID: 015654**
Clinical Externship
Apply and practice principles and skills acquired in the areas of chairside assisting, operative procedures, specialty procedures, laboratory procedures, business office procedures and dental radiology. Consists of observation and practice in a dental office setting with emphasis on chairside activities. Pre-requisite: Dental Assisting: Minimum grade of C in DAH 101, DAH 121, DAH 124, DAH 135, DAS 125, and DAS 130. Practicum: 5.0 credits (320 contact hours).
Components: Practicum
Attributes: Technical

DGD Digital Game and Simulation Design

DGD 131(3) **Course ID: 007066**
3D Texturing and Lighting I
Introduces the techniques for creating textures and lighting for 3D games and simulations. Pre-requisite: Computer Literacy course or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DGD 132(3) **Course ID: 005474**
Introduction to 3D Graphics
Emphasizes creating 3D graphics using one or more state-of-the-art software packages. Prerequisite: Computer literacy course or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DGD 231(3) **Course ID: 007067**
3D Texturing and Lighting II
Introduces advanced texturing and lighting techniques to enhance depth perception and realism within 3D environments. Pre-requisite: DGD 131 and DGD 132; or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DGD 232(3) **Course ID: 005476**
3D Character Development
Develop realistic 3D characters with complete body structure. Prerequisite: DGD 132 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DGD 233(3) **Course ID: 007068**
3D Character Rigging
Introduces basic techniques to rig a digital 3D character with a skeleton that can be manipulated to produce artistic or realistic movement. Pre-requisite: DGD 232 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DGD 234(3) **Course ID: 005475**
3D Animation
Introduces basic techniques to animate 3D characters and objects using constraints, manipulation, pivot point rotation, motion scripting, and motion flow. Prerequisite: DGD 132 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DGD 235(3) **Course ID: 007069**
3D Special Effects
Introduces digital 3D special effects including the four fundamental elements of air, fire, earth, and water. Pre-requisite: DGD 231 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DGD 236(3) **Course ID: 007070**
Game Engines I
Introduces students to configuring and using a multiplatform game engine to build 3D games and simulations. Pre-requisite: DGD 132 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DGD 237(3) **Course ID: 007071**
Game Engines II
Use a game engine to build an interactive, 3D graphics-based application that incorporates scripting, collision detection, optimized real-time rendering, and export/deployment support across multiple platforms. Pre-requisite: DGD 236 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DHG Dental Hygiene

DHG 120(3) **Course ID: 000337**
Pre-Clinical Dental Hygiene
Stresses basic assessment and clinical skills, related theory, and professional role and responsibilities of the dental hygienist as a member of the dental health team. Prerequisite: Admission into the Dental Hygiene Integrated Program. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (120 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DHG 130(3) **Course ID: 000338**
Clinical Dental Hygiene I
Focuses on preparing the student to provide patient treatment that includes preventive and therapeutic procedures to maintain oral health and assist the patient in achieving oral health goals. Prerequisite: Minimum grade of C in DAH 101, DAH 121, DAH 124, DAH 135, and DHG 120. Lecture: 1.5 credits (22.5 contact hours). Lab: 0.5 credits (60 contact hours). Clinical: 1.0 credit (120 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Technical

DHG 132(2) **Course ID: 004331**
Pharmacology
Examines the disciplines of pharmacology and therapeutics as related to dental hygiene. Prerequisite: Minimum grade of C in DAH 101, DAH 121, DAH 124, DAH 135, and DHG 120. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

DHG 134(2) **Course ID: 006811**
Dental Nutrition
Presents basic principles of nutrition with emphasis on nutritional counseling in relationship to dental health, determination of patient nutritional status, and application to oral health and effects of nutritional deficiencies. Pre-requisite: Minimum grade of C in DAH 101, DAH 121, DAH 124, DAH 135, and DHG 120. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

DHG 136(1) **Course ID: 000340**
Periodontology
Focuses on the clinical, histological, and radiographic differences between healthy and unhealthy periodontal tissues. Prerequisite: Minimum grade of C in DAH 101, DAH 121, DAH 124, DAH 135, and DHG 120. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

DHG 220(4) **Course ID: 000341**
Clinical Dental Hygiene II
Focuses on providing comprehensive dental hygiene care in a clinical setting while emphasizing the treatment of periodontal and special needs patients. Prerequisite: Minimum grade of C in DAH 131, DHG 130, DHG 132, DHG 134, and DHG 136. Lecture: 2.0 credits (30 contact hours). Clinical: 2.0 credits (240 contact hours).
Components: Clinical, Lecture
Attributes: Technical

DHG 221(2) **Course ID: 004778**
Local Anesthesia and Nitrous Oxide Sedation
Presents a conceptual framework and clinical skills necessary to administer local dental anesthetics and nitrous oxide sedation in accordance with state dental practice acts. Prerequisite: Minimum grade of C in DAH 131, DHG 130, DHG 132, DHG 134, DHG 136, and current enrollment in the Dental Hygiene Integrated Program. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DHG 226(2) **Course ID: 000342**
Advanced Periodontology
Focuses on the role of the dental hygienist in the prevention, diagnosis and treatment of periodontal diseases. Prerequisite: Minimum grade of C in DAH 131, DHG 130, DHG 132, DHG 134, and DHG 136. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

DHG 230(3) **Course ID: 000343**
Clinical Dental Hygiene III
Focuses on mastery of dental hygiene clinical skills for patient care and preparation for written and clinical board examinations. Prerequisite: Minimum grade of C in DHG 220 and DHG 226. Lecture: 1.0 credit (15 contact hours). Clinical: 2.0 credits (240 contact hours).
Components: Clinical, Lecture
Attributes: Technical

DHG 238(2) **Course ID: 000344**
Community Dental Health Issues
Examines basic concepts in assessing community dental health needs and planning, implementing, evaluating, and presenting dental health programs to various community groups. Prerequisite: Minimum grade of C in DHG 220 and DHG 226. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

DHP Dental Hygiene

DHP 120(4) **Course ID: 004859**
Dental Hygiene I
Includes basic assessment and clinical skills, related theory, professional role and responsibilities of the dental hygienist as a member of the dental health team. Prerequisite: Acceptance into the Dental Hygiene Program; Computer Literacy or equivalency; and CPR certification. BIO 137 and BIO 139 or equivalent, with a grade of "C" or better. Lecture: 2.5 credits (37.5 contact hours); Clinical: 1.5 hours (180 contact hours).
Components: Clinical, Lecture
Attributes: Technical

DHP 121(3) **Course ID: 004860**
Oral Biology I
Includes oral histology and embryology, regional head and neck anatomy, and dental anatomy applicable to the practice of dental hygiene. Prerequisite: Acceptance into the Dental Hygiene Program; Computer Literacy or equivalent; and CPR certification. BIO 137 and BIO 139 or equivalent, with a grade of "C" or better. Lecture: 2.0 credits (30 contact hours); Laboratory: 1.0 credit (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DHP 122(2) **Course ID: 006832**
Dental Nutrition
Presents basic principles of nutrition with emphasis on nutritional counseling in relationship to dental health, determination of patient nutritional status, and application to oral health and effects of nutritional deficiencies. Prerequisite: Acceptance into the Dental Hygiene Program; Computer Literacy or equivalent; and CPR certification. BIO 137 and BIO 139 or equivalent, with a grade of "C" or better. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

DHP 130(3) **Course ID: 004861**
Dental Hygiene II
Continues DHP 120 which prepares the student to provide treatment that includes preventative and therapeutic procedures to promote and maintain oral health and assist the patient in achieving oral health goals. Prerequisite: [DHP 120 and DHP 121 and DHP 122 and (BIO 226 or equivalent)] with a grade of "C" or better. Lecture: 2.0 credits (30 contact hours). Clinical: 1.0 credit (120 contact hours).
Components: Clinical, Lecture
Attributes: Technical

DHP 131(5) **Course ID: 004862**
Oral Biology II
Covers the disciplines of general pathology, oral pathology, pharmacology, and therapeutics as related to dental hygiene care. Prerequisite: [DHP 120 and DHP 121 and DHP 122 and (BIO 226 or equivalent)] with a grade of "C" or better. Lecture: 4.5 credits (67.5 contact hours). Lab: 0.5 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DHP 135(3) **Course ID: 004863**
Dental Radiology
Presents the theory and clinical practice of oral radiographic methods. Includes history and development of x-radiation; properties and uses of x-radiation; radiation hygiene; exposing, processing and mounting intraoral and extraoral radiographs; identification of radiographic anatomical landmarks; and advancements in computer imaging technology in dental radiology. Prerequisite: Acceptance into the Dental Hygiene Program; Computer Literacy or equivalent; and CPR certification. BIO 137 and BIO 139 or equivalent, with a grade of "C" or better. Lecture: 2.5 credits (37.5 contact hours). Laboratory: 0.5 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DHP 136(2) **Course ID: 004864**
Periodontics I
Focuses on the clinical, histological and radiographic differences between healthy and unhealthy periodontal tissues. Includes etiology, risk factor assessment, pathogenesis and classification of periodontal diseases. Prerequisite: [DHP 120 and DHP 121 and DHP 122 and (BIO 226 or equivalent)] with a grade of "C" or better. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

DHP 220(3) **Course ID: 004865**
Dental Hygiene III
Emphasizes the continued treatment of clinical patients. Prepares student for treatment and management of dental patients with special needs and emphasizes appropriate changes in dental treatment in response to a patient's medical condition. Prerequisite: (DHP 130 and DHP 131 and DHP 135 and DHP 136) all with a grade of "C" or better. Clinical: 2.0 credits (240 contact hours). Discussion: 1.0 credit (15 contact hours).
Components: Clinical, Discussion
Attributes: Technical

DHP 222(3) **Course ID: 005040**
Special Needs Patients
Focuses on the specific oral health care needs of persons with a variety of medical, disabling or mental conditions and provides for discussion of innovative approaches to serving populations with special oral health care needs. Emphasizes special pharmacological considerations and treatment modifications. Prerequisite: (DHP 130 and DHP 131 and DHP 135 and DHP 136) with a grade of "C" or better. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DHP 224(2) **Course ID: 004866**
Dental Materials
Introduces the physical and chemical properties of dental materials and their application. Prerequisite: (DHP 130 and DHP 131 and DHP 135and DHP 136) with a grade of "C" or better. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

DHP 226(2) **Course ID: 004867**
Periodontics II
Provides for the continuation and expansion of the content of Periodontics for the Dental Hygienist I. Emphasizes the role of the dental hygienist in the recognition of systematic implications as related to periodontal diseases and current advancements in the management of patients with periodontal disease. Introduces current surgical therapies with discussion of supportive periodontal therapy. Prerequisite: (DHP 130 and DHP 131 and DHP 135 and DHP 136) with a grade of "C" or better. Lecture: 1.5 credits (22.5 contact hours). Laboratory: 0.5 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DHP 229(2) **Course ID: 004850**
Local Anesthesia
Includes common oral local anesthesia injection techniques and the related background information are addressed in this course. Subjects include: anatomic considerations, armamentarium, basic injection techniques, record keeping neurophysiology, related pharmacology, patient evaluation, complications and contraindications. The pharmacology, administration and contraindications of Nitrous Oxide are also included. This elective course satisfies the Kentucky State Dental Practice Act regarding "delegation of block and infiltration anesthesia and nitrous oxide analgesia to dental hygienists." Prerequisite: (DHP 130 and DHP 131 and DHP 135 and DHP 136) with a grade of "C" or better. Lecture: 1.25 credits (18.75 contact hours). Lab: .75 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DHP 230(3) **Course ID: 004868**
Dental Hygiene IV
Focuses on the mastery of all dental hygiene clinical skills utilized in treating all types of patients. Requires the completion and presentation during seminar time of a case study on a clinical patient. Prerequisite: (DHP 220 and DHP 222 and DHP 224 and DHP 226) with a grade of "C" or better. Clinical: 2.0 credits (240 contact hours). Discussion: 1.0 credit (15 contact hours).
Components: Clinical, Discussion
Attributes: Technical

DHP 235(1) **Course ID: 004869**
Principles of Practice
Covers the legal, ethical, and managerial aspects of dental hygiene practice. Prerequisite: (DHP 220 and DHP 222 and DHP 224 and DHP 226) with a grade of "C" or better. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

DHP 238(3) **Course ID: 004870**
Community Dental Health
Introduces basic concepts in assessing and surveying community dental health needs. Includes discussion of planning, implementing and evaluating dental health programs, as well as current trends and issues in preventive dental health education. Covers concepts related to reading and interpreting scientific literature. Requires students to develop and present a community dental health project and a scientific tabletop presentation. Prerequisite: DHP 220 and DHP 222 and DHP 224 and DHP 226. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DHP 299(1 - 4) **Course ID: 004851**
Instructor Consent Required
Independent Study in Dental Hygiene
Consists of a special project or experience, approved by an instructor, provides an objective for independent study for dental hygiene technology students. This course may be repeated to a maximum of six credit hours. This is not a dental hygiene program requirement. Prerequisite: Consent of instructor. Lecture: variable. Lab: Variable.
Components: Laboratory, Lecture
Attributes: Technical

DIT Diesel Technology

DIT 103(2) **Course ID: 001273**
Preventive Maintenance Lab
Instruction on preventive maintenance practices, scheduled procedures, documents, and D.O.T. required record system and on determining the needs for repair. Laboratory: 2.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

DIT 105(1) **Course ID: 006815**
Mechanical Principles
Provides opportunities to practice hands on skills of measuring with precision measurement tools such as micrometers, dial indicator sand caliper. This class also provides opportunities for the student to practice drilling and tapping. Proper rigging techniques are illustrated and practice to ensure that the student will know how to safely lift large and awkward items. Laboratory: 1.0 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

DIT 110(3) **Course ID: 001274**
Introduction To Diesel Engines
Covers fundamental concepts of the operation of two- and four-stroke diesel and gasoline engines. Includes basic engine components and their functions, engine performance terminology, two- and four-stroke operation, combustion principles, and engine disassembly with basic hand tools. Corequisite: DIT 111. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DIT 111(2) **Course ID: 001275**
Introduction To Diesel Engines Lab
Includes the hands-on concepts covered in DIT 110. Covers the inspection, diagnosis and repair strategies for the basic repair of internal combustion diesel engines. Corequisite: DIT 110. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

DIT 112(3) **Course ID: 001276**
Diesel Engine Repair
Includes how to take a disassembled engine and evaluate the condition of each component. Includes the identification and use or function of each component of the engine. Covers cylinder block and components, cylinder heads and valve train components, cylinder heads and valve train components, and engine lubrication systems. Prerequisite: DIT 110 or ADX 150. Corequisite: DIT 113. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DIT 113(2) **Course ID: 001277**
Diesel Engine Repair Lab
Includes the hands-on concepts covered in DIT 112. Covers the inspection, diagnosis and repair strategies of internal combustion late model diesel engines. Pre-requisite: DIT 111 or ADX 151. Corequisite: DIT 112. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

DIT 120(3) **Course ID: 001278**
Introduction to Maintenance Welding
This course provides training in the identification, inspection and maintenance of welding electrodes. Training will be given in the principles and processes of welding plates and pipes. Instruction will be given in lab safety and basic oxy fuel cutting.
Components: Lecture
Attributes: Technical

DIT 121(3) **Course ID: 001279**
Introduction to Maintenance Welding Lab
Provides laboratory experiences in which students acquire the manipulative skills needed to weld surface, fillet, and groove welds in flat and horizontal positions. The students will perform oxy fuel cutting operations. Lab: 3.0 credits (135 contact hours).
Components: Laboratory
Attributes: Technical

DIT 122(3) **Course ID: 001280**
Undercarriage
Students learn the theory and operation of undercarriage systems and their components. These components include endless track, roller track, roller frames, idlers, roller supports, and mainframes. Corequisite: DIT 123
Components: Lecture
Attributes: Technical

DIT 123(3) **Course ID: 001281**
Undercarriage Lab
Provides opportunities to troubleshoot and repair some parts of undercarriage systems and their components. These components include endless track, roller track, roller frames, idlers, roller supports, and mainframes. Lab: 3.0 credits (135 contact hours).
Components: Laboratory
Attributes: Technical

DIT 140(3) **Course ID: 001282**
Hydraulics
Covers the theory and operation of a hydraulic system including pumps, filters, reservoirs, valves and actuators. Corequisite: DIT 141. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DIT 141(2) **Course ID: 001283**
Hydraulics Lab
Includes the hands-on concepts covered in DIT 140. Covers the inspection, diagnosis and repair strategies of hydraulic systems. Corequisite: DIT 140. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

DIT 150(3) **Course ID: 001284**
Power Trains
Covers the theory and operation of the power train systems on medium and heavy duty trucks. Covers the diagnosis and repair techniques of the power train system. Corequisite: DIT 151. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DIT 151(2) **Course ID: 001285**
Power Trains Lab
Provides for practical application of concepts taught in DIT 150. Covers topics covered that will include clutches, transmission, and drive axles on medium and heavy duty trucks. Corequisite: DIT 150. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

DIT 152(3) **Course ID: 001286**
Powertrain for Construction Equipment
Students learn the theory and principles of the operation of power transmissions. They learn to diagnose and repair power train units including torque connectors, standard and automatic transmissions.
Components: Lecture
Attributes: Technical

DIT 153(2) **Course ID: 001287**
Powertrain for Construction Equipment Lab
Students troubleshoot, disassemble, evaluate parts and reassemble components of a power train system, such as torque connectors, standard and automatic transmissions, and drive lines.
Components: Laboratory
Attributes: Technical

DIT 160(3) **Course ID: 001288**
Steering and Suspension
Covers the theory, operation and diagnosis of the steering and suspension system on medium and heavy duty trucks. Corequisite: DIT 161. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DIT 161(2) **Course ID: 001289**
Steering and Suspension Lab
Provides for practical application of concepts taught in DIT 160. Introduces skills necessary in the diagnosis and repair of truck suspension systems, wheel alignment, and wheel balancing. Pre-requisite: DIT 160. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

DIT 180(3) **Course ID: 001290**
Brakes
Covers the operational theory and application of air brakes, hydraulic brakes and anti-lock brake systems. Covers the function and repair of disc brakes and drums brakes. Corequisite: DIT 181. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DIT 181(2) **Course ID: 001291**
Brakes Lab
Provides hands on activities related to the concepts covered in DIT 180. Includes the inspection, diagnosis and performing repairs on air powered and hydraulic powered braking systems found on medium and heavy duty trucks. Corequisite: DIT 180. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

DIT 190(3) **Course ID: 001292**
Electrical Systems for Diesel Equipment
Covers the operation and diagnosis of the truck electrical system including the battery, starter, alternator, lighting and accessories. Corequisite: DIT 191. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DIT 191(2) **Course ID: 001293**
Electrical Systems for Diesel Equipment Lab
Provides hands-on activities related to the concepts covered in DIT 190. Covers inspection, diagnosis and performing repairs on batteries, starters, alternators and accessory systems found on medium and heavy duty trucks. Corequisite: DIT 190. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

DIT 198(1) **Course ID: 001297**
Instructor Consent Required
Practicum
The Practicum provides supervised on-the-job work experience related to the student's education objectives. Students participating in the Practicum do not receive compensation. Prerequisite: Permission of Instructor
Components: Practicum
Attributes: Technical

DIT 199(1) **Course ID: 001298**
Cooperative Education
The cooperative education program provides supervised on-the-job work experience related to the students education objectives. Students participating in the Cooperative Education Program normally receive compensation. Prerequisite: Permission of Instructor
Components: Co-Op
Attributes: Technical

DIT 298(2) **Course ID: 001299**
Instructor Consent Required
Practicum
The Practicum provides supervised on-the-job work experience related to the students education objectives. Students participating in the Practicum do not receive compensation. Prerequisite: Permission of Instructor
Components: Practicum
Attributes: Technical

DLC Digital Literacy

DLC 100(3) **Course ID: 007298**
Digital Literacy
Introduces students to main components of digital literacy including computer fundamentals, key applications, and living online. This course closely mirrors the KCTCS Digital Literacy Standards. Lecture: 3.0 credits (45 contact hours)
Components: Lecture
Attributes: Digital Literacy

DLC 1001(1) **Course ID: 007393**
Computer Fundamentals
Introduces students to main components of digital literacy regarding Computer Fundamentals. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

DLC 1002(1) **Course ID: 007394**
Key Applications
Introduces students to main components of digital literacy regarding Key Applications. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

DLC 1003(1) **Course ID: 007395**
Living Online
Introduces students to main components of digital literacy regarding Living Online. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

DLT Dental Laboratory Technology

DLT 101(2) **Course ID: 004871**
Dental Morphology
The anatomical characteristics and dental terminology of the permanent human detention are detailed. Other topics include dento-osseous structures, oral musculature, and the development of teeth. Waxing exercises of selected teeth are performed in the laboratory as a means of understanding tooth form and the development of manual dexterity. Prerequisite: Admission into the DLT Program or consent of instructor. Lecture: 1 credit (15 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DLT 111(2) **Course ID: 004872**
Dental Materials I
The major content of this course includes an introduction to the study of dental materials including basic concepts in chemistry. Emphasis is placed on the chemical and physical properties of gypsum, resin, and wax used in dentistry. Basic manipulation of these materials is included in order to prepare the student for future use in the dental laboratory. Prerequisite: Admission into the DLT Program or consent of instructor. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

DLT 112(2) **Course ID: 004874**
Dental Materials II
This course emphasizes the metallurgy of dental alloys including the mechanism of crystallization, strain hardening and the chemical process of corrosion. Materials associated with fabricating metal prostheses are studied and include impression materials, cast alloys and wrought alloys. Hazard and infection control procedures in the dental laboratory are presented as well as basic study of applicable physics and unit conversion. Prerequisite: DLT 111 or consent of instructor. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

DLT 121(2) **Course ID: 004875**
Complete Dentures I
The basic principles of complete denture prosthodontics is presented including the fundamentals of arranging and contouring artificial dentures. Identification of oral landmarks and changes that occur in the edentulous patient are discussed. Emphasis is placed on identifying the purpose and use of custom trays, baseplates and occlusion rims. Laboratory procedures include fabricating custom trays, baseplates, occlusion rims, and a complete set of dentures. Prerequisite: Admission into the DLT Program. Lecture: 1 credit (15 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DLT 122(2) **Course ID: 004876**
Complete Dentures II
Advanced principles of complete denture prosthodonitics are presented including balanced, monoplane and lingualized occlusion. Emphasis is also placed on the considerations in the oral cavity that effect the success of removable prosthodontic treatment. Laboratory procedures include denture repairs, selective grinding and fabricating complete dentures. Prerequisite: DLT 121. Lecture: 1 credit (15 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DLT 131(2) **Course ID: 004877**
Removable Partial Dentures I
The basic principles of removable partial denture prosthodontics are presented. Emphasis is placed on the fabrication procedures and understanding of the basics of survey and design. Detailed information about the various major and minor connectors is discussed as well as learning the Kennedy Classification system. Laboratory procedures include fabricating two removable partial dentures including the attachment of artificial denture teeth. Prerequisite: Admission into the DLT Program. Lecture: 1 credit (15 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DLT 132(2) **Course ID: 004878**
Removable Partial Dentures II
Advanced principles of removable partial denture prosthodontics is presented with emphasis on design principles. Detailed information about direct retainers, indirect retainers, rests and bases is discussed. Laboratory procedures involve fabricating three removable partial dentures including the attachment of artificial denture teeth. Prerequisite: DLT 131. Lecture: 1 credit (15 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DLT 142(2) **Course ID: 004879**
Occlusion
Theories of occlusion; interarch and intraarch relationships; the temporomandibular joint and its movements; articulators, interocclusal records, and face-bow transfer; occlusal schemes; and restorative considerations in occlusal therapy are discussed and/or put to practical application in this course. Prerequisite: Admission into the Dental Laboratory Program. Lecture: 1 credit (15 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DLT 151(2) **Course ID: 004880**
Fixed Prosthodontics I
The basic principles of crown and bridge fixed prosthodontics are presented including the fabrication of both single and multi-unit full metal restorations. Emphasis is placed on preparing and evaluating working casts, waxing anatomical tooth patterns, spruing, investing, burnout, casting, and polishing. Additional laboratory procedures include fabricating restorations on various types of articulators, developing functional occlusion, and soldering. Prerequisite: Admission into the DLT Program. Lecture: 1 credit (15 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DLT 152(2) **Course ID: 004881**
Fixed Prosthodontics II
The basic principles of metal ceramic fixed prosthodontics are presented including the fabrication of both single and multi-unit restorations. Emphasis is placed on esthetic restorations, preparing and evaluating working casts, waxing substructure patterns, spruing, investing, burnout, casting, and polishing. Additional laboratory procedures include applying opaque, dentin, and enamel ceramic powders and contouring fired porcelain. Prerequisite: DLT 151. Lecture: 1 credit (15 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DLT 261(8) **Course ID: 004882**
Applied Laboratory Techniques
Students fabricate a more complex variety of dental prostheses in four specialty areas: complete denture prosthodontics, removable partial denture prosthodontics, dental ceramics, and fixed prosthodontics (crown and bridge). Curriculum content includes reinforcement of techniques and procedures that are taught in the 100 level DLT courses. Emphasis will be placed on management of laboratory time and project load to improve the quantity and quality of laboratory work. Prerequisite: DLT 122, DLT 132, DLT 142, and DLT 152. Lecture: 2 credits (30 contact hours); Laboratory: 6 credits (270 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DLT 262(8) **Course ID: 004883**
Advanced Specialty Laboratory Techniques
Students fabricate dental prostheses at a more advanced level in at least one of the following specialty areas: complete denture prosthodontics, dental ceramics, fixed prosthodontics (crown and bridge), orthodontic appliances, or removable partial denture prosthodontics. Emphasis is placed on incorporating productivity, flow time, and quality requirements. Laboratory experience is provided in the classroom or selected externships in local dental laboratories. Prerequisite: DLT 261. Lecture: 2 credits (30 contact hours); Laboratory: 6 credits (270 contact hours).
Components: Laboratory, Lecture

DLT 281(2) **Course ID: 004884**
Orthodontic Laboratory Techniques
Fixed, removable, active and passive orthodontic appliances are studied in this course. Principles of tooth movement, classifications of malocclusion, orthodontic materials and their manipulation, orthodontic study models, and functional appliances will be discussed. Prerequisite: DLT 122. Lecture: 1 credit (15 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DLT 291(2) **Course ID: 004885**
Dental Laboratory Management, History & Ethics
Dental laboratory management, business plans, financial planning, history of dentistry and dental technology, and those ethics and laws which are specific to dentistry will be presented. Prerequisite: Completion of all 100 level DLT courses. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

DMS Diagnostic Medical Sonographer

DMS 105(13) **Course ID: 005941**
Introduction to Cardiology
Provides an overview of anatomy and physiology and the electrophysiology of the cardiovascular system. Includes theory and application of the 12-lead electrocardiogram, holter monitor, and stress test. Covers cardiac pharmacology, medical terminology, medical law and ethics, and patient care. Includes Cardiac Catheterization lab, Vascular Sonography, and Respiratory Care. Prerequisite: Admission to Cardiac Sonography Program. Lecture: 10.0 credits (150 contact hours). Clinical: 3.0 credits (180 contact hours).
Components: Clinical, Lecture
Attributes: Technical

DMS 109(7) Course ID: 004392 Department Consent Required
Sonography I
Provides a study of diagnostic foundations of clinical medicine pertinent to abdominal, superficial structures, musculoskeletal and non-cardiac chest sonography. Includes obtaining the clinical history, interpretation of clinical laboratory test, the pathophysiologic effects of disease, related clinical signs and symptoms, sectional anatomy, and normal/abnormal sonographic patterns. Includes a laboratory component for the practice and application of normal sonographic patterns, basic scanning techniques and protocol. Prerequisite: Admission to Diagnostic Medical Sonography program; Computer Literacy; NAA 100 or equivalent; CPR certification. Lecture: 5.0 credits (75 contact hours), Laboratory: 2.0 credits (90 contact hours) (45:1 Ratio).
Components: Laboratory, Lecture
Attributes: Technical

DMS 111(7) **Course ID: 006259**
Abdominal Sonography
Provides a study of diagnostic foundations of clinical medicine pertinent to abdominal, superficial, musculoskeletal and non-cardiac chest sonography. Includes obtaining the clinical history, interpretation of clinical laboratory test, the pathophysiologic effects of disease, related clinical signs and symptoms, sectional anatomy, and normal/abnormal sonographic patterns. Includes a laboratory component for the practice and application of normal sonographic patterns, basic scanning techniques and protocol. Prerequisite: Admission to Diagnostic Medical Sonography program; Computer Literacy; NAA 100 or equivalent; CPR certification. Lecture: 5.0 credits (75 contact hours) Lab: 2.0 credits (90 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DMS 112(2) **Course ID: 006795**
Patient Care Concepts in Sonography
Provides an introduction to patient care in the sonography department, adding to instruction received in required nursing assistant course. Includes information about healthcare settings, professionalism, methods of credentialing, as well as legal and ethical considerations in patient care. Pre-requisite: Admission to DMS program, completion of CPR and minimum 75 hour nursing assistant course. Lecture: 1.0 credit hour (15 contact hours). Lab: 1.0 credit hour (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DMS 115(6) **Course ID: 004395**
Instructor Consent Required
Sonography II
Covers the study of the clinical applications within the sonographic specialties of obstetrics, gynecology, female breast, and neurosonography. Includes related clinical symptoms and laboratory tests, pathophysiologic effects of disease and anomalies, and normal/abnormal sonographic patterns. Includes basic scanning techniques and protocol. with an emphasis on the demonstration of clinical applications of theoretical principles and concepts. Pre-requisite: Admission to Diagnostic Medical Sonography program; Computer Literacy; NAA 100 or equivalent; CPR certification. Lecture: 4.0 credits (60 contact hours), Laboratory: 2.0 credits (90 contact hours), (45:1 Ratio).
Components: Laboratory, Lecture
Attributes: Technical

DMS 116(6) Course ID: 006260
OB/GYN Sonography
Covers the study of the clinical applications within the sonographic specialties of obstetrics and gynecology. Includes related clinical symptoms and laboratory test, pathophysiologic effects of disease and anomalies, and normal/abnormal sonographic patterns. Includes basic scanning techniques and protocol. Designed for the student to utilize the laboratory facilities to demonstrate clinical applications of theoretical principles and concepts. Prerequisite: Admission to Diagnostic Medical Sonography Program; Computer Literacy; CPR certification; NAA 100 or equivalent. Lecture/Lab: 6.0 credits (150 contact hours).
Components: Lecture
Attributes: Technical

DMS 117(7) Course ID: 006261
Vascular Sonography I
Provides a study of diagnostic foundations of clinical medicine pertinent to vascular sonography. Includes obtaining the clinical history, interpretation of clinical laboratory test, the pathophysiologic effects of disease, related clinical signs and symptoms, sectional/vascular anatomy, and normal/abnormal sonographic patterns. Includes a laboratory component for the practice and application of normal sonographic patterns, basic scanning techniques and protocol. Prerequisite: Admission to Diagnostic Medical Sonography program; Computer Literacy; NAA 100 or equivalent; CPR certification. Lecture/Lab: 7.0 credits (165 contact hours).
Components: Lecture
Attributes: Technical

DMS 118(6) Course ID: 006262
Vascular Sonography II
Covers the study of the clinical applications of peripheral venous, peripheral arterial and abdominal vasculature within the sonographic vascular concentration.
Includes related clinical symptoms and laboratory test, pathophysiologic effects of disease and anomalies, and normal/abnormal sonographic patterns. Includes basic scanning techniques and protocol. Designed for the student to utilize the laboratory facilities to demonstrate clinical applications of theoretical principles and concepts. Prerequisite: Admission to Diagnostic Medical Sonography program; Computer Literacy; NAA 100 or equivalent; CPR certification. Lecture/Lab: 6.0 credits (150 contact hours).
Components: Lecture
Attributes: Technical

DMS 119(6) Course ID: 004393 Department Consent Required
Ultrasonic Physics and Instrumentation
Consists of lectures and related laboratory exercises covering the areas of ultrasonic propagation principles, transducer parameters, interactive properties of ultrasound with human tissue, possible biologic effects, basic equipment types, instrumentation and quality control procedures, hemodynamics and basic Doppler. Prerequisite: Consent of Program Coordinator. Lecture: 6.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

DMS 121(6) Course ID: 006263 Department Consent Required
Sonography Physics and Instrumentation
Consists of lectures and related laboratory exercises covering the areas of ultrasonic propagation principles, transducer parameters, interactive properties of ultrasound with human tissue, possible biologic effects, basic equipment types, instrumentation and quality control procedures, hemodynamics, and basic Doppler. Prerequisite: PHY 151 OR PHY 152 OR PHY 171, or higher approved Physics course approved by DMS faculty. Lecture: 6.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

DMS 126(3 - 4) Course ID: 004394
Clinical Education I
Includes observation of all clinical duties performed in the ultrasound department. Covers basic instruction and scanning experience in abdomen, superficial structures, non-cardiac chest, embryo/fetus, gravid and non-gravid pelvic structures with basic competencies to be performed. Prerequisite: Minimum grade of "C" in (DMS 109 and DMS 115) or (DMS 111 and DMS 116). Clinical: 3.0 - 4.0 credits (180 - 240 contact hours).
Components: Clinical
Attributes: Technical

DMS 136(4) Course ID: 006264
Vascular Clinical Education I
Includes observation and practice of all clinical duties performed in the vascular lab with basic instruction and scanning experience under the supervision of a credentialed Vascular Sonographer. Prerequisite: DMS 117 with minimum "C" grade. Clinical: 4.0 credits (240 contact hours).
Components: Clinical
Attributes: Technical

DMS 145(12) Course ID: 005942
Cardiac Sonography I
Covers the identification of structures and the correct technique to obtain images of the heart. Includes the fundamentals of ultrasound physics and instrumentation required to perform echocardiograms. Prerequisite: Admission to Diagnostic Medical Sonography Program; Computer Literacy; Minimum grade of "C" in BIO 135 or (BIO 137 and BIO 139) and (PHY 151 or PHY 152 or PHY 171) and MAT 150. Lecture/Lab: 12.0 credits (225 contact hours).
Components: Lecture
Attributes: Technical

DMS 199(1) Course ID: 005936
Online Physics Review
Includes a review of basic ultrasound physics, transducers, bioeffects, artifacts, quality assurance and principles of Doppler techniques. Prerequisite: DMS 119 or 121 with minimum "C" grade or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

DMS 201(1) Course ID: 005937
Online Abdomen Review
Provides a review of abdominal sonography to prepare the student for the related registry. Includes obtaining a clinical history, interpretation of clinical laboratory tests, pathologic basis for disease, related clinical signs and symptoms, sectional anatomy, and normal/abnormal sonographic patterns. Prerequisite: DMS 109 or DSM 111 with minimum "C" grade or Consent of Program Coordinator. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

DMS 202(1) Course ID: 005938
Online OB/GYN Review
Provides a review of related clinical signs and symptoms, laboratory tests, and normal/abnormal sonographic patterns in preparation for the related Ob/Gyn registry. Prerequisite: DMS 115 or DMS 116 with minimum "C" grade or Consent of Program Coordinator. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

DMS 204(2) Course ID: 006266 Department Consent Required
Online Vascular Review
Provides a review of vascular sonography to prepare the student for the ARDMS certification examination. Includes activities and quizzes related to cerbrovascular, intracranial, peripheral venous, peripheral arterial and abdominal vascular sonography. Prerequisite: Consent of Program Coordinator. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

DMS 205(6) Course ID: 005943
Cardiac Sonography II
Provides content related to the more advanced cardiovascular diseases. Includes how to correlate Doppler findings and measurements. Covers transesophageal echocardiography, stress echocardiography, Intensive Care Unit patient and Operative/Perioperative applications. Prerequisite: (DMS 145 with a minimum "C" grade) or Consent of Program Coordinator. Lecture/Lab: 6.0 credits (270 contact hours)
Components: Lecture
Attributes: Technical

DMS 206(3) Course ID: 006267
Online Vascular Sonography III
Covers the various test, miscellaneous conditions encountered in vascular sonography. Emphasizes the importance of quality measurements and safety practices. Prerequisite: Admission to Diagnostic Medical Sonography Program; Computer Literacy; NAA 100 or equivalent; CPR certification. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DMS 215(6) Course ID: 005944
Cardiac Sonography III
Covers the basic embryology of the heart, fetal and postnatal circulation, and basic types of congenital heart defects found in the adult. Includes how systemic disease affects the heart and basic clinical problem solving techniques used in echocardiography. Prerequisite: DMS 205 with minimum "C" grade. Lecture/Lab: 6.0 credits (270 contact hours).
Components: Lecture

DMS 217(3) Course ID: 006702
Basic Cardiac Ultrasound Technology
Provides review and practical application of ultrasound and Doppler physics; cardiac anatomy, physiology, and pathophysiology; cardiac imaging: 2D, M-mode, Spectral and Color Doppler; and exam protocols. Pre-requisite: Applicants must be RDMS credentialed or graduate of an accredited sonography program or consent of a sonography program coordinator. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DMS 230(5 - 8) Course ID: 004396
Clinical Education II
Includes interaction in all clinical duties performed in all ultrasound departments. Covers abdomen, superficial structures, non- cardiac chest, embryo/fetus, and the gravid and non-gravid pelvic structures with performance of basic and advanced competencies to be performed. Prerequisite: Admission to Diagnostic Medical Sonography Program; Computer Literacy; Minimum grade of "C" in BIO 135 or (BIO 137 and BIO 139) and (PHY 151 or PHY 152 or PHY 171) and MAT 150. Clinical: 5.0 - 8.0 credits (300 - 480 contact hours).
Components: Clinical
Attributes: Technical

DMS 236(8) Course ID: 006268
Vascular Clinical Education II
Includes experience in clinical applications of cerebrovascular, intracranial, peripheral arterial, peripheral venous, and abdominal vascular sonographic examinations. Requires the performance of competencies with the rate of progress dependent upon the student's ability to comprehend and perform assignments. Prerequisite: DMS 136 with minimum "C" grade. Clinical: 8.0 credits (480 contact hours).
Components: Clinical
Attributes: Technical

DMS 237(5) Course ID: 006269
Vascular Clinical Education III
Provides a more active clinical role in assisting the practicing vascular Sonographer and performing sonographic duties under direct supervision. Requires the performance of competencies with the rate of progress dependent upon the student's ability to comprehend and perform assignments. Prerequisite: Minimum "C" grade in DMS 136 and DMS 236. Clinical: 5.0 credits (300 contact hours).
Components: Clinical
Attributes: Technical

DMS 240(5 - 8) **Course ID: 004398**
Clinical Education III
Continues the clinical experience by student assuming a more active role in assisting the practicing sonographer and performing sonographic duties under direct supervision with the rate of progress dependent upon the student's ability to comprehend and perform assignments. Prerequisite: DMS 230 with Minimum "C" grade. Clinical: 5.0 - 8.0 credits (300 - 480 contact hours).
Components: Clinical
Attributes: Technical

DMS 245(6) **Course ID: 005945**
Cardiac Sonography IV
Provides a comprehensive overview of program content with clinical applications. Prerequisite: DMS 145 with minimum "C" grade. Pre-requisite Or Co-requisite: DMS 205 with minimum "C" grade. Lecture/Lab: 6.0 credits (270 contact hours).
Components: Lecture
Attributes: Technical

DMS 255(6) **Course ID: 005939**
Vascular Technology
Presents normal/abnormal sectional anatomy, hemodynamics, patient assessment and diagnostic testing related to vascular technology. Includes applications of pathophysiologic basis, clinical signs and symptoms and typical findings related to the peripheral vascular system. Includes therapeutic interventions, intraoperative monitoring and the use of contrast agents. Covers vascular physics including blood flow characteristics and pressure/flow/velocity relationships. Prerequisite: Minimum "C" grade in (DMS 119 and DMS 240) or Consent of Program Coordinator. Lecture/Lab: 6.0 credits (120 contact hours).
Components: Lecture
Attributes: Technical

DMS 260(6) **Course ID: 005940**
Vascular Clinical Education
Provides clinical experience by student actively assisting and performing vascular procedures under direct supervision of a Vascular Technologist. Completes competencies including cerebrovascular, upper/lower venous/arterial extremity, and abdominal vasculature. Prerequisite: DMS 255 with minimum "C" grade. Clinical: 6.0 credits (360 contact hours).
Components: Clinical
Attributes: Technical

DMS 280(3) **Course ID: 005335**
Basic Vascular Technology
Provides review and practical application of vascular technology (Carotid Duplex Scanning and Peripheral Vascular Scanning) with an analysis of anatomy, physics, hemodynamics, exam protocols, and pathology. Prerequisite: Applicant must be RDMS credentialed or a graduate of an accredited sonography program or Consent of Program Coordinator. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DPT Additive Manufacturing and 3D Printing

DPT 100(3) **Course ID: 015703**
Introduction to 3D Printing Technology
Provides an introduction to the world of Three Dimensional printing (3DP) and its applications in conjunction with computer technology. Introduces topics including computer hardware and software, 3D printing technology, file management, the Internet, e-mail, the social web, sustainability, security, and computer and intellectual property ethics. Presents basic use of application, programming, systems, and utility software. Lecture/Lab: 3.0 credits (60 contact hours)
Components: Lecture
Attributes: Digital Literacy, Technical

DPT 102(2) **Course ID: 016604**
3D Printing Technology Fundamentals
Provides an introduction to the world of three-dimensional (3D) printing or additive manufacturing (AM) and its applications. Introduces topics including 3D printing technologies, basic use of 3D applications, programming, systems, 3D-scanning, and utility software. Pre-requisite or Co-requisite: CIT 105, demonstration of digital literacy competency by exam or certificate, or other approved course with digital literacy status. Lecture/Lab: 2.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DPT 150(3) **Course ID: 016605**
Introduction to Engineering Mechanics for 3D Printing
Provides an introduction to simplified engineering mechanical principles as they apply to 3D printing, or additive manufacturing, designs and products. Requires students to apply concepts related to simple force and stress analysis, material property selection, and deformation to their designs for the purpose of improving functional performance and overall printing success. Explores finishing and post processing techniques to enhance the final appearance and marketability of their printed work. Pre-requisite: DPT 100 or DPT 102. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

DPT 280(1) **Course ID: 016606**
Special Projects for 3D Printing, Level I
Allows the student to gain intermediate level experience in their prospective fields through projects and tasks assigned by the instructor and based on applications the student may one day experience as a professional. Focuses on various assignments and curriculum as determined by the program instructor. Pre-requisite: DPT 100 or DPT 102. Lecture/Lab: 1.0 credits (30 contact hours)
Components: Lecture
Attributes: Technical

ECEL Electrical and Computer Engineer

ECEL 252(3) **Course ID: 005759**
Introduction to Electrical Engineering
Reviews electrical quantities, definitions and laws, as applied to DC and AC circuits. Introduces transient and steady-state solutions of linear networks, impedance concepts, the Phasor Transform for AC Analysis, complex AC Power, diode applications, and operational Amplifiers. Discusses electrical safety. Prerequisite: PHY 232, MA 214. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ECO Economics

ECO 101(3) **Course ID: 000445**
Contemporary Economic Issues
Covers contemporary economic issues such as inflation, poverty and affluence, globalization, and environmental pollution. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, Course Also Offered in Modules

ECO 150(3) **Course ID: 006703**
Introduction to Global Economics
Covers the causes and issues of global economic interdependence, with particular emphasis on cross-cultural implications of globalization. Includes global economic issues such as economic development, global economic governance, changing demographics, health care, world poverty, changing patterns of food production, global energy use, and the economic consequences of global environmental issues. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

ECO 201(3) **Course ID: 000447**
Principles of Microeconomics
Covers the allocation of scarce resources from the viewpoint of individual economic units. Topics include supply and demand, elasticity, costs, and markets. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, Course Also Offered in Modules

ECO 202(3) **Course ID: 000449**
Principles of Macroeconomics
Covers how society's needs are satisfied with the limited resources available. Includes issues such as inflation, unemployment, economic growth, globalization, and fiscal and monetary policy. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, Course Also Offered in Modules

ECO 1011(1) **Course ID: 005925**
How Markets Work
Covers the foundations of contemporary economic issues emphasizing scarcity, choice, benefits, costs, and supply and demand. Lecture: 1 credit (15 contact hours).
Components: Lecture

ECO 1012(1) **Course ID: 005926**
Markets and Macroeconomic Goals
Covers contemporary economic issues such as price indices, efficiency, equity, poverty and welfare. Prerequisite: ECO 1011. Lecture: 1 credit (15 contact hours).
Components: Lecture

ECO 1013(1) **Course ID: 005927**
Markets and Regulation
Covers contemporary economic issues such as externalities, market failure, globalization, and environmental pollution. Prerequisite: ECO 1012. Lecture: 1 credit (15 contact hours).
Components: Lecture

ECO 2011(0.75) **Course ID: 005928**
The Role of Economics
Covers the allocation of scarce resources from the viewpoint of individual economic units. Topics include the circular flow of resources in the economy, the production possibilities frontier, and opportunity cost. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

ECO 2012(0.75) **Course ID: 005929**
How Markets Work
Covers the allocation of scarce resources from the viewpoint of individual economic units. Includes supply and demand and government intervention in markets. Prerequisite: ECO 2011. Lecture: 0.75 (11.25 contact hours).
Components: Lecture

ECO 2013(0.75) **Course ID: 005930**
Markets and Welfare
Covers the allocation of scarce resources from the viewpoint of individual economic units. Includes consumer and producer decision making and the equity and efficiency of markets. Prerequisite: ECO 2012. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

ECO 2014(0.75) **Course ID: 005931**
Firm Behavior and Market Structures
Covers the allocation of scarce resources from the viewpoint of individual economic units. Includes competitive and non-competitive markets. Prerequisite: ECO 2013. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

ECO 2021(0.75) **Course ID: 005932**
Measuring Macroeconomic Outcomes
Covers how society's needs are satisfied with the limited resources available. Includes national income accounting, inflation, and unemployment. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

ECO 2022(0.75) **Course ID: 005933**
Basic Macroeconomic Relationships
Covers how society's needs are satisfied with the limited resources available. Topics include the aggregate expenditure model, aggregate supply and aggregate demand. Prerequisite: ECO 2021. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

ECO 2023(0.75) **Course ID: 005934**
Stabilization Tools
Covers how society's needs are satisfied with the limited resources available. Includes economic growth, fiscal policy, and monetary policy. Prerequisite: ECO 2022. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

ECO 2024(0.75) **Course ID: 005935**
The International Economy
Covers how society's needs are satisfied with the limited resources available. Includes international trade and international finance. Prerequisite: ECO 2023. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

EDM Education

EDM 270(3) **Course ID: 004011**
Teaching and Learning in the Middle Grades
Provides students in middle school education with knowledge and experience critical for instruction of middle school students and management of middle school classrooms. Requires field experience of a minimum of 15 clock hours in instructor-approved education agencies. Prerequisite: EDP 202 and EDU 201. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EDP Educational and Counseling Psychology

EDP 202(3) **Course ID: 000452**
Human Development and Learning
Presents theories and concepts of human development, learning, and motivation and applies them to interpreting and explaining human behavior and interaction in relation to teaching across the developmental span from early childhood to adulthood. Requires field experience of a minimum of 15 clock hours in instructor-approved educational agencies. Prerequisite: PSY 100 or PY 110. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Other

EDP 203(3) **Course ID: 000453**
Teaching Exceptional Learners in Regular Classrooms
Introduces the characteristics and instructional needs of exceptional learners with an overview of principles, procedures, methods, and materials for adapting educational programs to accommodate the integration of exceptional children in regular classrooms, when appropriate. Requires field experience of a minimum of 12 clock hours in instructor-approved educational agencies. Prerequisite: EDP 202 with an earned grade of "C" or higher. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Other

EDP 260(3) **Course ID: 016282**
Motivation and Classroom Management
Provides students with a theoretical background of motivation and behavior. Reviews current classroom practices to motivate students and ensure positive classroom behavior. Applies strategies to classroom situations. Teaches basic research methods that apply strategies to classroom situations. Pre-requisite: EDP 202. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

EDU Education

EDU 110(3) **Course ID: 004451**
Orientation to Education
Introduces the roles and responsibilities of both the paraeducator and the classroom teacher. Covers legal and ethical issues that might be encountered in the classroom, instructional support strategies that might be implemented by paraeducators, universal health and safety procedures, and the importance of communication and teamwork in the instructional environment. Introduces the design of learning environments that encourage active participation in individual and group settings. Requires 10 hours of field work. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EDU 120(3) **Course ID: 004450**
Child and Adolescent Development
Acquaints the student with the cognitive, social, moral, language, emotional, and physical development of children and adolescents. Addresses the application of these theories in the modern classroom. Requires 10 hours of field work. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EDU 130(3) **Course ID: 004449**
Introduction to Special Education
Introduces methods on the creation of a learning environment, basic classroom management theories, key principles and practices of special education, and the similarities and differences of individuals with and without exceptional learning needs. Requires 10 hours of field work. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EDU 140(3) **Course ID: 004448**
Introduction to Behavior Management
Introduces the student to strategies of classroom and behavior management that create a positive learning environment encouraging student self-advocacy, increased independence, and improved communication skills. Introduces behavior management strategies that encourage respect and value individual differences among children, youth, and adults and how consequences should be used to motivate positive student behavior. Includes focus on chronic behavior problems. Requires 10 hours of field work. Pre-requisite: ENG 101. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EDU 150(3) **Course ID: 004447**
Practical Experiences for the Paraeducator
Provides the capstone experience for the paraeducator certificate. Prerequisite: (EDU 110 and EDU 120 and EDU 130 and EDU 140) or Consent of Coordinator. Lecture: 1.0 credit (15 contact hours); Practicum/Co-op: 2.0 credits (150 contact hours).
Components: Co-Op, Lecture, Practicum
Attributes: Technical

EDU 201(3) **Course ID: 000451**
Introduction to American Education
Presents an introduction to teaching including teaching as a profession, major educational philosophies, social reform, trends and issues in education, curriculum and instruction. Requires a minimum of 15 clock hours of field observation in an approved educational setting. Prerequisite: ENG 101 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EDU 204(3) **Course ID: 004547**
Technology In the Classroom
Provides the student with a basic skill set to utilize technology in instruction and instructional management. Explores the methods of using computing fundamentals, key technology applications, and the digital environment to enhance teaching and learning. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Digital Literacy

EDU 240(3) **Course ID: 002279**
Elementary and Middle School Literature
Surveys both traditional and modern literature for children and adolescents. Emphasizes selection, evaluation, storytelling, and the use of media to meet the literary needs and interests of children from preschool through middle school. Requires fifteen hours of field observation. Pre-requisite: ENG 102. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EDU 270(3) **Course ID: 004551**
Elementary School Literature
Surveys traditional and modern literature for elementary school children. Emphasizes selection, evaluation, storytelling, and use of media to meet the literary needs and interests of children. Requires a minimum of 15 clock hours of field observation in an approved educational setting. Prerequisite: ENG 102. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EDU 280(3) **Course ID: 004446**
Education Externship/Co-Op
Provides a capstone experience for the AAS degree in Education, designed to integrate program competencies and curriculum to create a cumulative portfolio to demonstrate professional abilities. Requires 150 hours of field work. Pre-requisite: All program courses or Consent of Coordinator. Lecture: 1 credit (15 contact hours); Practicum/Co-op: 2 credits (150 contact hours).
Components: Co-Op, Lecture, Practicum
Attributes: Technical

EDU 299(3) **Course ID: 004445**
Instructor Consent Required
Selected Topics in Education
Addresses various education topics, issues and trends. Topics may vary from semester to semester at the discretion of the instructor; course may be repeated with different topics to a maximum of six credit hours. Prerequisite: Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EE Electrical Engineering

EE 211(4) **Course ID: 000454**
Circuits I
Fundamental laws, principles and analysis techniques for DC and AC linear circuits whose elements consist of passive and active components used in modern engineering practice including the determination of steady state and transient responses. Prerequisite: MA 114. Prerequisite or concurrent: PHY 232, PHY 242.
Components: Lecture
Attributes: Technical

EES Electronics

EES 101(2) **Course ID: 001332**
Basic Electronics
Provides the foundation for further study in technologies related to electricity or electronics. Addresses the following areas: basic electrical components and their properties, quantities, and units of measurement; calculation of voltage, current, resistance, energy, and power using Ohms Law; construction and analysis of series, parallel, and series/parallel circuits; principles of magnetism and electromagnetism; alternating current and voltage; reactive components; construction and analysis of RC, RL, and RLC circuits; sinusoidal and other waveforms. Lecture/Lab: 2.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

EET Electronics Technology

EET 119(5) **Course ID: 015852**
Basic Electricity
Introduces basic electricity concepts applicable to AC and DC circuits pertinent to the electrical technology industry. Provides an in-depth study of Ohm's Law, series, parallel, and series-parallel circuit characteristics. Focuses on providing students with an overview of common electrical safety practices, AC generation, AC and DC Principles, magnetic principles, transformers, capacitors, inductors, and basic electrical testing equipment along with a focus on the construction, calculation, measurement, and troubleshooting of various AC and DC circuits by way of laboratory exercises and classroom lecture. Pre-requisite: MAT 065 or equivalent placement level or consent of Instructor. Lecture/Lab: 5.0 credits (45-60 contact hours).
Components: Lecture
Attributes: Technical

EET 127(1) **Course ID: 015853**
Electrical Technology Capstone
Serves as the capstone course for the Electrical Technology degree program and all of its concentrations. Integrates prior learning outcomes into a single integrated learning experience. Includes an exit exam that all program graduates must take. Pre-requisite: Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

EET 150(2) **Course ID: 001355**
Transformers
Focuses on the operation, installation and application of AC single-phase and three-phase transformers. Testing and maintaining transformer equipment are emphasized, with safety integrated as a core component of the study. Prerequisite: [(ELT 110 or EET 119) with a minimum grade of "C"] or consent of Electrical Technology program advisor(s). Corequisite: EET 151. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

EET 151(1) **Course ID: 001356**
Transformers Lab
Focuses on the operation, installation and application of AC single-phase and three-phase transformers. Testing and maintaining transformer equipment is emphasized, with safety integrated as a core component of the study. Prerequisite[(ELT 110 or EET 119) with a minimum grade of "C"] or consent of Electrical Technology program advisor(s). Corequisite: EET 150. Lab: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: Technical

EET 154(2) **Course ID: 001358**
Electrical Construction I
Involves the study of materials and procedures used in construction wiring. Corequisite: EET 155
Components: Lecture
Attributes: Technical

EET 155(2) **Course ID: 001359**
Electrical Construction I Lab
Designed to give hands-on experiences with electrical materials and equipment in construction wiring. Corequisite: EET 154. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

EET 198(2) **Course ID: 001361**
Instructor Consent Required
Practicum
The practicum provides supervised on-the-job work experience related to the student's educational objectives. Students participating in the Practicum Education program do not receive compensation for their work. Prerequisite: Consent of Instructor
Components: Practicum
Attributes: Technical

EET 250(4) **Course ID: 001410**
National Electrical Code
Emphasizes the importance of the National Electrical Code as it applies to electrical installations: electrical safety issues, prevention of fire due to the use of electrical energy, prevention of loss of life and property from the hazards that might arise from the use of electrical energy, and proper selection of electrical equipment for hazardous and non-hazardous environments. A learning resource in the preparation for electrical licensing examinations. Prerequisite: [(EET 154 and EET 155 and EET 252 and EET 253) or (EET 254 and EET 255) with minimum grade of C] or consent of Electrical Technology program advisor(s). Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: Technical

EET 252(2) **Course ID: 001411**
Electrical Construction II
Expands the knowledge and skills needed to work in commercial and industrial construction wiring. Prerequisite: Consent of Instructor or EET 154. Corequisite: EET 253.
Components: Lecture
Attributes: Technical

EET 253(2) **Course ID: 001412**
Electrical Construction II Lab
Provides hands-on experiences needed to work in commercial and industrial construction wiring. Corequisite: EET 252. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

EET 254(3) **Course ID: 001413**
Electrical Construction
This course involves the study of materials and procedures and expands the knowledge and skills needed to work in commercial and industrial construction wiring. Corequisite: EET 255. Lecture: 3 credits 945 contact hours).
Components: Lecture
Attributes: Technical

EET 255(4) **Course ID: 001414**
Electrical Construction Lab
Designed to give hands-on experiences with electrical materials and equipment in commercial and industrial construction wiring. Corequisite: EET 254. Laboratory : 4 credits (120 contact hours).
Components: Laboratory
Attributes: Technical

EET 264(2) **Course ID: 001419**
Rotating Machinery
Focuses on the underlying principles of rotating electrical equipment including DC and AC motors and generating equipment construction, operating applications, and the maintenance of DC and AC motors and generating equipment. Prerequisite: [(ENGT 110 and ENGT 114) with a minimum grade of C] or consent of Electrical Technology program advisor(s). Corequisite: EET 265. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

EET 265(2) **Course ID: 001420**
Rotating Machinery Lab
Focuses on the principles of operation, application and maintenance of single-phase and three-phase AC motors and AC alternators, DC motors, DC generators. A study of and compliance with the National Electrical Code standards. Prerequisite: [(ELT 110 or EET 119) with a minimum grade of "C"] or consent of Electrical Technology program advisor(s). Corequisite: EET 264. Lab: 2.0 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

EET 266(3) **Course ID: 001421**
Rotating Machinery and Transformers
Focuses on the principles of operation and application of single-phase and three-phase AC transformers to include: analysis of voltage, current and power parameters and connection configurations. Gives an in-depth study of direct and alternating current rotating machinery that produces and utilizes electrical energy. Prerequisite: [ELT 110 and ELT 114 with a minimum grade of C] or consent of Electrical Technology program advisor(s). Corequisite: EET 267. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EET 267(3) **Course ID: 001422**
Rotating Machinery and Transformers Lab
Applies the principles of operation, application and maintenance of single-phase and three-phase AC transformers, motors and alternators, and DC motors and generators. A study of and compliance with the current National Electric Code standards will insure safe installation methods. Prerequisite: [(ELT 110 or EET 119) with a minimum grade of "C"] or consent of Electrical Technology program advisor(s). Corequisite: EET 266. Lab: 3.0 credits (90 contact hours)
Components: Laboratory
Attributes: Technical

EET 268(3) **Course ID: 001423**
Instructor Consent Required
Rotating Machinery Electrical Motor Controls I
This course focuses on the construction, operation and maintenance of DC motors and generators and AC motors and alternators. This course addresses the diversity of control devices and applications used in industry today. Safety and electrical lockouts are also included. Prerequisite: (ELT 110 or EET 119) with a minimum grade of "C" or consent of Electrical Technology program advisor(s). Corequisite: EET 269. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EET 269(4) **Course ID: 001424**
Rotating Machinery and Motor Controls I Lab
Provides practical experience in the use of control devices and their applications in industry today. Provides experience in the construction, operation and maintenance of AC motors and alternators, and DC motors and generators. Safety and electrical lockouts are included. Prerequisite: (ELT 110 or EET 119) with a minimum grade of "C" or consent of Electrical Technology program advisor(s). Corequisite: EET 268. Laboratory: 4.0 credits (120 contact hours). Lab: 4.0 credits (120 contact hours).
Components: Laboratory
Attributes: Technical

EET 270(2) **Course ID: 001425**
Electrical Motor Controls I
This course addresses the diversity of control devices and applications used in industry today. Safety and electrical lockouts are also included. Prerequisite: [(ELT 110 or EET 119) with a minimum grade of "C"] or consent of Electrical Technology program advisor(s). Corequisite: EET 271. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

EET 271(2) **Course ID: 001426**
Electrical Motor Controls I Lab
Provides practical experience in the use of control devices and their applications in industry today. Safety and electrical lockouts are included. Pre-requisite: [(ELT 110 or EET 119) with a minimum grade of "C"] or consent of the Electrical Technology program advisor(s). Corequisite: EET 270. Lab: 2.0 credit (60 contact hours).
Components: Laboratory
Attributes: Technical

EET 272(2) **Course ID: 001427**
Electrical Motor Controls II
This course provides advanced study of motor controls in industry. The course addresses solid state relays, hall effect sensors, proximity detectors and photo detectors. Tasks include sketching, installing and troubleshooting the following: three phase controls, variable speed drives using relays as well as solid state devices, and introduction to programmable controls. Prerequisite: EET 270. Corequisite: EET 273.
Components: Lecture
Attributes: Technical

EET 273(2) **Course ID: 001428**
Electrical Motor Controls II Lab
This course provides hands-on experience in advanced studies in electrical controls used in industry including three-phase motor control and variable speed control using solid state devices and programmable controls. Prerequisite: EET 270. Corequisite: EET 272. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

EET 274(3) **Course ID: 001429**
Electrical Motor Controls
This course addresses the diversity of control devices and applications used in industry today. Safety and electrical lockouts are also included. This course provides advanced study of motor controls in industry. The course addresses solid state relays, hall effect sensors, proximity detectors and photo detectors. Tasks include sketching, installing and troubleshooting the following: three phase controls, variable speed drives using relays as well as solid state devices, and introduction to programmable controls. Prerequisite: [(ELT 110 or EET 119) with a minimum grade of "C"] or consent of Electrical Technology program advisor(s). Corequisite: EET 275. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EET 275(4) **Course ID: 001430**
Electrical Motor Controls Lab
Provides practical experience in the use of control devices and their applications in industry today. Safety and electrical lockouts are included. Provides hands-on experience in advanced studies in electrical controls used in industry including three-phase motor control and variable speed control using solid state devices and programmable controls. Prerequisite: [(ELT 110 or EET 119) with a minimum grade of "C"] or consent of Electrical Technology program advisor(s). Corequisite: EET 274. Lab: 4.0 credits (120 contact hours).
Components: Laboratory
Attributes: Technical

EET 276(2) **Course ID: 001431**
Programmable Logic Controllers
Underlying principles and applications of programmable logic controllers including installation, logic fundamentals, and numbering systems; basic programming of inputs, outputs, timers, and counters, comparators, basic data manipulation, and safety circuits of industrial PLCs. Prerequisite: [(ELT 110 or EET 119) with a minimum grade of "C"] and [(EET 270 and EET 272) or EET 268 or EET 274 with a minimum grade of "C"] or consent of Electrical Technology program advisor(s). Corequisite: EET 277. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

EET 277(2) **Course ID: 001432**
Programmable Logic Controllers Lab
Provides practical applications of programmable logic controllers including installation, logic fundamentals, and numbering systems; basic programming of inputs, outputs, timers, and counters, comparators, basic data manipulation, and safety circuits of industrial. Prerequisite: [(ELT 110 or EET 119) with a minimum grade of "C"] and [EET 269 or (EET 271 and EET 273) or EET 275 with a minimum grade of "C"] or consent of Electrical Technology program advisor(s). Corequisite: EET 276. Lab: 2.0 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

EET 281(1) **Course ID: 001435**
Instructor Consent Required
Special Problems I
A course designed for the student who has demonstrated specific special needs. Prerequisite: Permission of Instructor
Components: Laboratory
Attributes: Technical

EET 283(2) **Course ID: 001436**
Instructor Consent Required
Special Problems II
A course designed for the student who has demonstrated specific special needs. Prerequisite: Permission of Instructor
Components: Laboratory
Attributes: Technical

EET 285(3) **Course ID: 001437**
Special Problems III
A course designed for the student who has demonstrated specific special needs. Prerequisite: Permission of Instructor
Components: Laboratory
Attributes: Technical

EET 286(2) **Course ID: 004627**
Programmable Logic Controllers II
Focuses on sequencer instructions, shift registers, process control instructions, networking, communications, human to machine interfaces, and troubleshooting techniques used with programmable logic controllers. Prerequisite: [(EET 276 and EET 277) with a minimum grade of C] or consent of Electrical Technology program advisor(s). Corequisite: EET 287. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

EET 287(2) **Course ID: 004628**
Programmable Logic Controllers II Lab
Provides hands on lab applications dealing with sequencers, shift registers, networks, communication software, human to machine interfaces, analog devices, and troubleshooting. Prerequisite: {(EET 276 and EET 277) with a minimum grade of C] or consent of Electrical Technology program advisor(s). Corequisite: EET 286. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

EET 298(1 - 8) **Course ID: 001438**
Practicum
The Practicum provides supervised on-the-job work experience related to the student's educational objectives. Students participating in the Practicum do not receive compensation. (This course may be taken for 1 - 8 credits)
Components: Practicum
Attributes: Technical

EET 299(1 - 8) **Course ID: 001439**
Instructor Consent Required
Cooperative Education Program
Co-op provides supervised on-the-job work experience related to the student's educational objectives. Students participating in the Cooperative Education program receive compensation for their work. (This course may be taken for 1 - 8 credits.) Prerequisite: Consent of Instructor
Components: Co-Op
Attributes: Technical

EFM Economics

EFM 100(3) **Course ID: 001440**
Personal Financial Management
Successful completion of this course will result in an understanding of the role of the U.S. in a global economy and how an individual can function successfully in the U.S. economic system. Students will explore the various aspects involved in being responsible consumers, the importance of personal financial planning, the relationship between employment opportunities and financial security, and other aspects of becoming successful and productive workers, consumers, and citizens.
Components: Lecture

EGY Energy Technologies

EGY 120(4) **Course ID: 006821**
Outside Plant Communications
Introduces students to fiber optic communication systems and up-to- date fiber techniques including how to design, install, test and maintain fiber optic single mode networks. Emphasizes Single Mode fiber optic installation with the associated international standards, theory, and practices. Prepares the student to work with fiber optic splicing, testing and troubleshooting equipment that is found in the workplace. Pre-requisite: (ELT 110 and ETT 110) or (electrical experience and consent of instructor). Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

EGY 170(4) **Course ID: 006822**
Energy Utility Technologies
Introduces students to the technologies used in energy utility companies, including line maintenance, underground operations, substations and switchyards and transmission operations. Gives students the opportunity to climb a utility pole and conduct basic maneuvers. Addresses types of underground systems, substation and switchyard equipment and transmission structures. Emphasizes electrical, underground, line maintenance and transmission safety. Pre-requisite: (ELT 110 and EET 150 and EET 151) or (electrical experience and consent of instructor). Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

EGY 220(4) **Course ID: 006823**
Energy Efficiency Electrical Controls
Designed for Electrical Technology students and Apprentice, Journeyman, Master, and Contractor Electricians as a foundation into the studies of green technology relating to electrical energy. Focuses on the assessment of electrical energy usage in commercial buildings with the understanding that the electrical energy technician will install and maintain efficient electrical controls and equipment. Prepares students to assist in the design of efficient electrical energy systems under the supervision of a Certified Energy Manager or licensed Professional Engineer. Pre-requisite: (ELT 110 and EET 154 and EET 155 and EET 252 and EET 253 and EET 250) or (electrical experience and consent of instructor). Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

EGY 230(4) **Course ID: 006824**
Solar / Photovoltaic Technologies
Covers the design and installation of grid connected, stand- alone, and hybrid photovoltaic (PV) systems, and involves hands-on work with PV systems and equipment. Intended for electrical technology students, apprentices, contractors, electricians, and other practitioners, with an overall goal of developing "system knowledgeable" professionals to help ensure the safety and quality of PV system installations. Pre-requisite: (ELT 110 and EET 154 and EET 155 and EET 252 and EET 253 and EET 250) or (electrical experience and consent of instructor). Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

EGY 240(4) **Course ID: 006825**
Energy Efficiency and Analysis
Discusses the basic principles of how energy flows into and out of a residential building, using the "House as a System" approach. Develops the skills needed to perform a home energy audit. Gives students hands-on experiences with a blower door, thermal imaging camera as well as other auditing tools. Pre-requisite: Consent of instructor. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

EGY 250(4) **Course ID: 006826**
Wind/ Turbine Technologies
Introduces the theory and practices of wind power and how it is used and connected as a renewable energy source for the home, farm and business. Pre-requisite: ELT110 or consent of instructor. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ELT Engineering & Electronics Technology

ELT 102(2) Course ID: 000526
Blueprint Reading
A comprehensive study of current drafting standards and blueprint reading techniques are included. Topics include standard lines and symbols, sketching techniques, orthographic projection, auxiliary views, detail and assembly drawings, dimensions, tolerances, sectional views, title block information, machining, specifications, and specialized forms of engineering drawings. Lecture: 2.0 (30 contact hours).
Components: Lecture
Course Equivalents: BRX 120
Attributes: Technical

ELT 103(3) Course ID: 005443
Introduction to Engineering
Provides an introduction to the engineering profession, engineering disciplines, and technology. Emphasizes a problem-solving approach, engineering design process, and team projects. Includes an introduction to engineering graphics. Intended for students of all majors. Prerequisite or Corequisite: Current Placement Scores for College Level Quantitative Reasoning or Consent of Instructor. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

ELT 105(3) Course ID: 005591
Computer Maintenance Essentials
Introduces basic computer hardware and operating systems, covering skills such as installing, building, upgrading, repairing, configuring, troubleshooting, optimizing, diagnosing and preventive maintenance, with additional elements of soft skills and security. Emphasizes objectives that map closely to the CompTIA A+ Essentials national examination that validates the basic skills needed by any entry-level computer service technician. Prerequisite: Computer literacy or Consent of Instructor. Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ELT 106(2) Course ID: 000529
Mechanical Engineering Graphics
Includes basic technical sketching and working drawings as applied to mechanical engineering. Students will create or analyze multi-view drawings, symbols, schematics, and sketches typical of mechanical graphics drawings. Lab: 2.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

ELT 107(4) Course ID: 000533
Computer Applications for Technicians
Introduces computer applications commonly used in technical occupations. Covers circuit analysis, computational, analytical, and other software packages. Lecture: 1.0 credit (15 contact hours). Lab: 3 credits (90 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

ELT 110(5) Course ID: 004631
Circuits I
Introduces application of basic DC and AC circuits, including circuit analysis techniques with discussion of introductory magnetism and transformer principles. Emphasizes design, construction, and troubleshooting of simple DC and AC circuits in laboratory exercises. Prerequisite: (MAT 065 or equivalent placement level) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours). Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

ELT 114(5) Course ID: 004634
Circuits II
Addresses theory and application of complex alternating current and direct current circuits. Emphasizes impedance, reactance, power and electrical energy, electrical measurement instruments, and circuit analysis. Prerequisite: (ELT 110 with a grade of "C" or greater) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours). Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

ELT 118(3) Course ID: 000566
Computer Numerical Control
Introduces computer numerical control technology, covering programming and metal removal techniques. Includes topics of controllable machine components, tools, programmable functions, control system components, physics of metal cutting, metal cutting data, coordinate systems, NC related dimensioning, and CNC programming. Prerequisite: Consent of Instructor. Lecture: 2.0 credits (30 contact hours), Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ELT 120(3) Course ID: 004637
Digital I
Introduces theory and application of digital logic methods. Includes Boolean algebra, combinational logic theory, sequential circuits, number systems and codes, and design and troubleshooting of digital logic circuits. Prerequisite: (MAT 065 or equivalent placement level) or Consent of Instructor. Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

ELT 122(3) Course ID: 000573
Mechanical Power Transmission Systems
Introduces industrial mechanical systems and devices, which are commonly associated with Millwright and Industrial Maintenance functions. Includes topics of belt drives, gear drives, chain drives, couplings, packings/ seals, bearings, mechanical fasteners, pipe fittings, pumps, and valves. Co-requisite: ELT 124. Lecture: 3.0 credit (45 contact hours).
Components: Lecture
Attributes: Technical

ELT 124(1) Course ID: 000578
Mechanical Power Transmission Systems Lab
Introduces mechanical systems and devices common to the Millwright and Industrial Maintenance trades. Includes topics of belt drives, gear drives, chain drives, couplings, packings and seals, bearings, mechanical fasteners, pipe fittings, pumps, and valves. Co-requisite: ELT 122. Lab: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: Technical

ELT 201(4) Course ID: 000603
Statics and Strength of Materials
Introduces static equilibrium involving forces, moments, couples, and equivalent systems. Explores stresses, strains and deflections associated with trusses, frames, beams, columns, and joints. These devices are subjected to various loadings and environments, and are made of standard construction materials. Prerequisite: (MAT 150 and MAT 155 or MAT 110) or consent of instructor. Lecture: 2.0 credits (30 contact hours), Lab: 2.0 credits (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ELT 210(4) Course ID: 004639
Devices I
Provides basic theory and application of semi-conductor devices. Emphasizes design, construction and troubleshooting of diode and transistor circuits, amplifiers and power supplies. Prerequisite: (ELT 110 with a grade of "C" or greater) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours), Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

ELT 214(4) Course ID: 004642
Devices II
Covers theory and application of advanced semiconductor devices. Emphasizes thyristors, FETs, integrated circuits, and other devices as applied to audio frequency amplifiers, feedback circuits, modulators, detectors, and other basic electronic circuits. Prerequisite: (ELT 210 with a grade of "C" or greater) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours), Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

ELT 220(3) Course ID: 004645
Digital II
Provides theory and application of advanced digital logic methods. Includes small and medium scale integrated circuits logic families, interfacing techniques, arithmetic circuitry, programmable devices, and an introduction to microprocessors. Prerequisite: (ELT 120 with a grade of "C" or greater) or Consent of Instructor. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

ELT 222(3) Course ID: 004647
Instructor Consent Required
Mechanics of Telephony
Covers history of the telephone and regulations that impact the telecommunications industry, analog and digital transmission mediums, and the evolution of wireless and digital services. Utilizes the graduated height method for developing climbing skills and confidence. Prerequisite: Consent of Instructor. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ELT 224(3) Course ID: 004648
Instructor Consent Required
Basic Telecommunications Installation and Maintenance
Provides an overview of concepts needed to complete the duties of a telecommunications service technician and provide the foundational basic skills and knowledge required to effectively perform the installation and maintenance job duties and functions. Introduces fiber optic transmissions and cable repair. Prerequisite: Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ELT 232(3) Course ID: 000623
Computer Software Maintenance
Includes maintenance of the personal computer with an emphasis on installation, upgrading, and configuration of the operating system. Covers memory management, boot sequences, printing subsystem, application software and networking with troubleshooting as a main focal point including viruses. When combined with ELT 234, this course will help prepare students to take CompTIA A+ certification tests. Prerequisite: (Computer literacy course or demonstrate competency) or consent of instructor. Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ELT 234(3) Course ID: 000521
Computer Hardware Maintenance
Covers maintenance of the personal computer with an emphasis on installation, upgrading, and configuration of computer hardware. Covers network and Internet access, internal addressing, architecture, interrupts complete PC construction and basic troubleshooting. When combined with ELT 232, this course will help prepare students to take CompTIA A+ certification tests. Prerequisite: (Computer literacy course or demonstrate competency) or consent of instructor. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ELT 240(6) **Course ID: 004650**
Communications Electronics
Provides the theory of AM and FM, RF communications, transmission, reception, multiplexing, and modern data communications. Prerequisite: (ELT 220 and ELT 214) or Consent of Instructor. Lecture: 4.0 credits (60 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ELT 244(4) **Course ID: 000644**
Instructor Consent Required
Electrical Machinery and Controls
Covers the study of theory and utilization of electrical motors and generators, including AC and DC motors and drives. Includes theory and utilization of limit switches, solenoids, relays, contactors, and solid state devices in control circuits. Provides application of digital and analog control techniques, ladder logic, and programming techniques to industrial and manufacturing processes. Prerequisite: Consent of instructor. Lecture: 3.0 credits (45 contact hours) Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ELT 250(4) **Course ID: 000657**
Programmable Logic Controllers
Covers the study of Programmable Logic Controllers with an emphasis on the function and use of PLCs in an industrial environment. Prerequisite: ELT 244 or Consent of instructor. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ELT 260(5) **Course ID: 004652**
Instructor Consent Required
Robotic and Industrial Automation
Introduces theory of robots including terminology, components, and basic programming. Provides theory and application of servo and non-servo robots. Includes robot types, controllers, manipulators, and basic robotic programming. Provides the theory and operation of flexible and computer-integrated manufacturing and control systems. Provides the opportunity to develop, set up work cells, and integrate the work cells into a total computer-integrated manufacturing system at a beginning level. Prerequisite: Consent of Instructor. Lecture: 3.0 credits (45 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

ELT 261(3) **Course ID: 000679**
Instrumentation and Measurements
Provides a study of instruments used by the mechanical engineering technician and training in the techniques of their use. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ELT 264(4) **Course ID: 000691**
Mechanical Design
Covers study techniques associated with the design of machine elements, including structural members subjected to combined stresses resulting from shear or torsion coupled with axial and bending loadings. Includes material treatments, failure theories, failure prevention, and steady and variable (fatigue) elements, including rotating shafts, pressure vessels, power screws, and attachment schemes. Prerequisite: (ELT 201 and PHY 211) or Consent of Instructor. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

ELT 265(3) **Course ID: 000697**
Applied Fluid Power
Covers the fundamental types of hydraulic and pneumatic devices and circuits used in industry. Includes basic fluid mechanics, industrial hydraulic components, pneumatic components, circuit design and analysis, electrical control of fluid power circuits, and fluid power maintenance and safety. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ELT 289(1) **Course ID: 006806**
Engineering and Electronics Technology Capstone
Serves as the capstone course for the Engineering and Electronics Technology degree program and all of its concentrations. Integrates prior learning outcomes into a single integrated learning experience. Includes an exit exam that all program graduates must take. Pre-requisite: (ELT 120 and ELT 210) or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

ELT 290(1 - 4) **Course ID: 000742**
Selected Topics in Engineering Technology: (Topic)
Offers selected topics in engineering technology, due to rapidly changing technology or in response to local needs. Includes various topics semester to semester at the discretion of the instructor. Course may be repeated with different topics to a maximum of eight credit hours. Prerequisite: Consent of instructor. Lecture: 1-4 hours (15-60); Laboratory: 0-3 hours (0-45).
Components: Laboratory, Lecture
Attributes: Technical

ELT 295(1 - 2) **Course ID: 000746**
Instructor Consent Required
Independent Problems
Provides an objective for independent study for engineering and electronics technology students using a problem or special project approved by the instructor. This course may be repeated twice or to a maximum of four credit hours. Prerequisite: Consent of instructor. Lecture: 1.0 - 2.0 credits (15- 30 contact hours). Laboratory: 1.0 - 2.0 (30-60 contact hours)
Components: Laboratory, Lecture
Attributes: Technical

ELT 1101(1) **Course ID: 005638**
Basic Electricity
Introduces basic DC circuits, specifically safety, basic test equipment, electrical resistance and Ohm's law. Prerequisite: (MAT 065 or equivalent placement level) or Consent of Instructor. Lecture: 0.6 credits (9 contact hours). Lab: 0.4 credits (12 contact hours).
Components: Laboratory, Lecture

ELT 1102(1) **Course ID: 005639**
Series and Parallel Circuits
Introduces basic DC circuits, specifically series and parallel circuits. Emphasizes design, construction, and troubleshooting of simple DC circuits in laboratory exercises. Prerequisite: (ELT 1101 with a grade of "C" or better) or Consent of Instructor. Lecture: 0.6 credits (9 contact hours). Lab: 0.4 credits (12 contact hours).
Components: Laboratory, Lecture

ELT 1103(1) **Course ID: 005640**
Introductory Circuit Analysis
Introduces basic DC circuits, specifically series-parallel circuit analysis techniques. Emphasizes design, construction, and troubleshooting of simple DC circuits in laboratory exercises. Prerequisite: (ELT 1102 with a grade of "C" or better) or Consent of Instructor. Lecture: 0.6 credits (9 contact hours). Lab: 0.4 credits (12 contact hours).
Components: Laboratory, Lecture

ELT 1104(1) **Course ID: 005641**
Magnetism and Alternating Current
Introduces basic AC circuits, specifically introductory magnetism and basic AC theory. Emphasizes design, construction, and troubleshooting of simple AC circuits in laboratory exercises. Prerequisite: (ELT 1103 with a grade of "C" or better) or Consent of Instructor. Lecture: 0.6 credits (9 contact hours). Lab: 0.4 credits (12 contact hours).
Components: Laboratory, Lecture

ELT 1105(1) **Course ID: 005642**
Capacitance and Inductance
Introduces basic AC circuits, specifically capacitance, inductance and transformer principles. Emphasizes design, construction, and troubleshooting of simple AC circuits in laboratory exercises. Prerequisite: (ELT 1104 with a grade of "C" or better) or Consent of Instructor. Lecture: 0.6 credits (9 contact hours). Lab: 0.4 credits (12 contact hours).
Components: Laboratory, Lecture

ELT 1201(1) **Course ID: 005648**
Instructor Consent Required
Digital Basics
Introduces basic digital circuits, specifically number systems and input output functions of gates and circuits. Prerequisite: Consent of Instructor. Lecture: 0.66 credits (10 contact hours). Lab: 0.34 credits (10 contact hours).
Components: Laboratory, Lecture

ELT 1202(1) **Course ID: 005649**
Logic Circuit Design
Introduces design methods for basic digital circuits. Prerequisite: (ELT 1201 with a grade of "C" or better) or Consent of Instructor. Lecture: 0.67 credits (10 contact hours), Lab: 0.33 credits (10 contact hours).
Components: Laboratory, Lecture

ELT 1203(1) **Course ID: 005650**
Logic Circuit Components and Troubleshooting
Covers construction, troubleshooting and testing of logic circuits. Prerequisite: (ELT 1201 with a grade of "C" or better) or Consent of Instructor. Lecture: 0.67 credits (10 contact hours). Lab: 0.33 credits (10 contact hours).
Components: Laboratory, Lecture

EM Engineering Mechanics

EM 221(3) **Course ID: 000462**
Statics
Study of forces on bodies at rest. Vector algebra; study of force systems; equivalent force systems; distributed forces; internal forces; principles of equilibrium; application to trusses, frames and beams; and friction. Prerequisite or concurrent: MA 213.
Components: Lecture
Attributes: Other

EMS Paramedic/Allied Health

EMS 105(6) **Course ID: 007303**
Emergency Medical Technician - EMT
Provides the first level of training in the career structure of Emergency Medical Services. Integrates didactic course material and the lab component necessary for the delivery of entry level emergency medical care to individuals who are experiencing a disruption in normal body functions due to illness and/or injury and require intervention to prevent morbidity and mortality. Prepares the student to sit for the National Registry EMT examination that is required for Kentucky certification as an EMT. Focuses on basic anatomy and physiology, scene and patient assessment, airway and ventilation, cardiovascular and body systems support, motion limiting devices, wound and fracture management, administration of basic patient medications, extrication, transportation, and patient monitoring as well as medico-legal aspects and ambulance operations. Includes a minimum twenty-four (24) hour clinical observation in the emergency department and/or on a state licensed ambulance service. Pre-requisite: CPR 100 Cardiopulmonary Resuscitation or Current CPR completion
Components: Lecture
Attributes: Technical

EMS 150(5) **Course ID: 016094**
Electrocardiogram Technology
Designed for students wanting to work in doctor's offices, hospitals, cardiac clinics, or anywhere electrocardiograms need to be performed. Integrates comprehensive knowledge of the anatomy of the heart including conduction pathways, circulatory system, and mechanical function. Presents the medical terminology, pathophysiology related to cardiac crisis, arrhythmia recognition and 12-lead interpretation. Pre-requisite: Reading, English, and Mathematics assessment exam scores above KCTCS developmental level or successful completion of the prescribed developmental courses. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (45 contact hours). Clinical: 1.0 credit (45 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Technical

EMS 200(4) Course ID: 007304
Introduction to Paramedicine
Integrates comprehensive knowledge of EMS Systems including: safety and wellness, communications, medical/ legal issues, life span parameters, public health, medical terminology, pathophysiology, anatomy and physiology, critical thinking, and physical assessment and research to improve the health and well-being of individuals. Pre-requisite: EMS 105 or FRS 2061 or current unrestricted state certification or validated National Registry status as EMT eligible and Program Admission. AHS 115 or CLA 131 Or Consent of Instructor. BIO 135 Or Consent of Instructor. Co-requisite: EMS 211. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

EMS 210(3) Course ID: 007305
Emergency Pharmacology
Introduces students to the paramedic's role and responsibilities of medication administration and the basic principles of pharmacology. Presents introductory core concepts of pharmacology including drug regulations, classifications, schedules, categories, delivery systems, calculations, and drug administration. Covers core concepts of emergency clinical pharmacology including major body systems, illness and injury, and methods drugs are used therapeutically to manage affected individuals. Integrates appropriate anatomy and physiology, medical terminology, and ethical and legal behaviors. Pre-requisite: EMS 200. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EMS 211(2) Course ID: 007306
Fundamentals Lab
Encourages both an individual and group approach to simulated patient care in the laboratory setting. Includes fundamental skill sets such as patient assessment, airway and ventilation, and IV and fluid therapy. Co-requisite: EMS 200. Lab: 2.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

EMS 214(6) Course ID: 015876
Paramedic Theory for Registered Nurses (RNs)
Provides the Registered Nurse with specialized knowledge and skills necessary to assess and manage ill and/ or injured patients in the pre-hospital setting. Areas of specialized instruction include: pre-hospital environments, preparatory skills, airway management, patient assessment, trauma and medical patient management, obstetrical/gynecological conditions, pediatric and neonatal care, psychiatric and behavioral emergencies, and special considerations. Pre-requisite: Must be a registered nurse and EMT. Lecture/Lab: 6.0 credits (120 contact hours).
Components: Lecture
Attributes: Technical

EMS 215(1) Course ID: 007307
Clinical Experience I
Applies didactic knowledge, psychomotor skills, and laboratory instruction with the realities of patient care in the hospital and field setting. Includes supervision by a registered nurse, nurse practitioner, physician, or paramedic preceptor in an environment that represents both an instructional and evaluative phase of the program focusing on the ambulance and field setting and the emergency department. Pre-requisite: EMS 211. Clinical: 1.0 credit (60 contact hours).
Components: Clinical
Attributes: Technical

EMS 220(3) Course ID: 007308
Cardiovascular Emergencies
Provides a detailed study of cardiovascular emergencies and the assessment and management of patients requiring critical intervention. Includes anatomy and physiology, medical terminology, pathophysiology related to cardiac crisis, arrhythmia recognition and 12-lead ECG for field diagnosis, as well as pharmacological and electrical interventions. Pre-requisite: EMS 210 and EMS 211. Co-requisite: EMS 221. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EMS 221(1) Course ID: 007309
Cardiac and Trauma Lab
Designed to encourage both an individual and group approach to simulated patient care in the laboratory setting. Includes fundamental skill sets and the addition of cardiovascular and trauma emergency patient care and management. Co-requisite: EMS 220 and EMS 230. Lab: 1.0 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

EMS 225(1) Course ID: 007310
Clinical Experience II
Provides the opportunity for application of didactic knowledge, psychomotor skills, and laboratory instruction with the realities of patient care in the hospital setting. Supervised by a registered nurse, nurse practitioner, physician, or paramedic preceptor in an environment that represents both an instructional and evaluative phase of the program with a focus on the emergency department, operating room, and respiratory care. Pre-requisite: EMS 215. Clinical: 1.0 credit (60 contact hours).
Components: Clinical
Attributes: Technical

EMS 230(4) Course ID: 007311
Traumatic Emergencies
Presents the advanced concepts of out-of-hospital trauma care and critical thinking activities leading to formulation of a field impression and implementation of an appropriate treatment plan and scene management. Includes the kinematics of trauma, assessment, resuscitation, management, monitoring, and transportation of trauma patients across the life span. Co-requisite: EMS 221. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

EMS 231(1) Course ID: 007312
Medical Lab
Designed to encourage both an individual and group approach to simulated patient care in the laboratory setting. Includes fundamental skill sets with a focus on application to medical emergencies. Co-requisite: EMS 240 and EMS 250. Lab: 1.0 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

EMS 235(2) Course ID: 007313
Clinical Experience III
Provides the opportunity for application of didactic knowledge, psychomotor skills, and laboratory instruction with the realities of patient care in the hospital setting. Supervised by a registered nurse, nurse practitioner, physician, or paramedic preceptor in an environment that represents both an instructional and evaluative phase of the program focusing on the emergency department, obstetric unit, mental health facility, and pediatric units. Pre-requisite: EMS 225. Clinical: 2.0 credits (120 contact hours).
Components: Clinical
Attributes: Technical

EMS 240(3) Course ID: 007314
Medical Emergencies I
Provides an understanding of the anatomic structures, physiology, and pathophysiology encountered during assessment and the provision of care for medical emergencies involving the respiratory system, nervous system, abdominal and gastrointestinal tracts, genitourinary and renal systems, gynecology, musculoskeletal system, and the eyes, ears, nose, and throat. Co-requisite: EMS 231. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EMS 250(3) Course ID: 007315
Medical Emergencies II
Provides an understanding of the anatomic structures, physiology, and pathophysiologies encountered during assessment and the provision of care for medical emergencies encompassing immunology, infectious disease including HIV/AIDS, the endocrine system, psychiatric conditions, toxicology, and hematology. Pre-requisite: EMS 240. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EMS 260(3) Course ID: 007316
Special Populations
Provides the opportunity to develop special knowledge and skills necessary to assess and manage ill and or injured patients across the human life span. Focuses on the acquisition of clinical knowledge and skills in diverse populations that include obstetrics, neonatology, pediatrics, geriatrics, and special challenge topics. Pre-requisite: EMS 250. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EMS 270(1) Course ID: 007317
EMS Operations
Provides knowledge necessary to safely manage multi-casualty incidents and rescue situations, utilize air medical resources, identify hazardous materials, perform vehicle extrication, and minimize the associated risks related to terrorism and disaster. Lecture: 1.0 credits (15 contact hours).
Components: Lecture
Attributes: Technical

EMS 275(1) Course ID: 007318
Seminar in Advanced Life Support (ALS)
Presents a comprehensive course encompassing advanced cardiac life support and pediatric advanced life support, or trauma life support, or other seminar course in relative subject matter such as medical emergencies or geriatric emergencies, to enhance the knowledge and skills acquired in the paramedic program. Addresses immediate life threatening conditions and critical interventions in a case study-scenario format where principles of assessment and intervention are applied in a team setting. Pre-requisite: EMS 225. Lab: 1.0 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

EMS 285(5 - 6) Course ID: 007319
Field Internship & Summation
Provides the opportunity for application of didactic knowledge, psychomotor skills, and clinical instruction with the realities of being the team leader delivering advanced patient care in the field setting. Supervised by a paramedic preceptor in an environment that represents both an instructional and evaluative phase of the program. Included is the summative phase of the Field Internship. Pre-requisite or Co-requisite: EMS 275. Lab: 1.0 credit (45 contact hours). Practicum: 4.0 - 5.0 credits (360- 450 contact hours).
Components: Laboratory, Practicum
Attributes: Technical

EMS 2851(3) Course ID: 016630
Field Internship I
Provides the opportunity for application of didactic knowledge, psychomotor skills, and clinical instruction with the realities of being the team leader delivering advanced patient care in the field setting. Supervised by a paramedic preceptor in an environment that represents both an instructional and evaluative phase of the program. Included is the summative phase of the Field Internship. Pre-requisite OR Co-requisite: EMS 275. Practicum: 3.0 credits (270 contact hours).
Components: Practicum

EMS 2852(2 - 3) Course ID: 016631
Field Internship II
Provides the opportunity for continued application of didactic knowledge, psychomotor skills, and clinical instruction with the realities of being the team leader delivering advanced patient care in the field setting. Supervised by a paramedic preceptor in an environment that represents both an instructional and evaluative phase of the program. Included is the summative phase of the Field Internship. Pre-requisite OR Co-requisite: EMS 2851. Laboratory: 1.0 credit (45 contact hours). Practicum 2.0 credits (180 contact hours).
Components: Laboratory, Practicum

ENC English Composition

ENC 090(3) **Course ID: 000464**
Foundations of College Writing I
Introduces students to writing as a process with an emphasis on paragraph-length assignments and writing in response to reading. Stresses basic conventions of standard English as these apply to students' own work as well as the use of technology to produce and share writing. Pre-requisite: Placement by KCTCS assessment and placement policy. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Remedial - English, Course Also Offered in Modules

ENC 091(3) **Course ID: 000465**
Foundations of College Writing II
Applies writing as a process with instruction in intermediate writing skills and technology. Stresses organization, idea development through critical thinking, and editorial improvement through multi-paragraph writings. Introduces basic research and documentation through writing in response to reading. Pre-requisite: Placement by KCTCS Assessment and Placement policy. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Remedial - English, Course Also Offered in Modules

ENC 096(4) **Course ID: 016247**
Introduction to College Writing
Introduces and applies writing as a process, beginning with basic writing skills and paragraph length assignments and moving toward intermediate writing skills and multi-paragraph assignments. Stresses application of basic conventions of standard English. Emphasizes organization, topic development through critical thinking, editorial improvement through systematic revision, and the use of technology to produce and share writing. Introduces basic research and documentation through writing in response to reading. Pre-requisite: COMPASS Score in Writing: 26-48 or ACT score: 12-14. Lecture: 4 credits (60 contact hours)
Components: Lecture
Attributes: Remedial - English

ENC 0901(1) **Course ID: 006746**
Sentence Basics
Introduces the basic conventions of standard English as these apply to students" own writing. Prerequisite: As determined by KCTCS Placement Policy. Lecture: 1.0 credit (15 contact hours)
Components: Lecture
Attributes: Remedial - English

ENC 0902(0.25) **Course ID: 006747**
Writing With Computers
Introduces the use of technology to produce and share writing. Prerequisite: As determined by KCTCS Placement Policy or successful completion of ENC 0901. Lecture: 0.25 credits (3.75 contact hours)
Components: Lecture
Attributes: Remedial - English

ENC 0903(0.75) **Course ID: 006748**
Writing Paragraphs
Introduces the writing process with an emphasis on paragraph-length assignments. Prerequisite: As determined by KCTCS Placement Policy or successful completion of ENC 0902. Lecture: 0.75 credits (11.25 contact hours).
Components: Lecture
Attributes: Remedial - English

ENC 0904(1) **Course ID: 006749**
Pathway to Writing
Provides practice in the writing process and stresses effective paragraphs with emphasis placed on writing in response to reading. Prerequisite: As determined by KCTCS Placement Policy or successful completion of ENC 0903. Lecture 1.0 credit (15 contact hours)
Components: Lecture
Attributes: Remedial - English

ENC 0911(0.75) **Course ID: 006750**
Intermediate Grammar
Introduces intermediate writing skills and editorial improvement, stressing the conventions of standard written English. Prerequisite: As determined by KCTCS Placement Policy or successful completion of ENC 090. Lecture 0.75 credits (11.25 contact hours).
Components: Lecture
Attributes: Remedial - English

ENC 0912(1) **Course ID: 006751**
Composition Strategies
Provides practice in the writing process, stressing organization, idea development, and editorial improvement. Prerequisite: As determined by KCTCS Placement Policy or successful completion of ENC 0911. Lecture: 1 credit (15 contact hours)
Components: Lecture
Attributes: Remedial - English

ENC 0913(0.25) **Course ID: 006752**
Introduction to Research
Introduces basic research and documentation through writing in response to reading. Prerequisite: As determined by KCTCS Placement Policy or successful completion of ENC 0912. Lecture: .25 credits (3.75 contact hours).
Components: Lecture
Attributes: Remedial - English

ENC 0914(1) **Course ID: 006753**
Writing as Process
Provides practice in the writing process, stressing organization, idea development, and editorial improvement. Prerequisite: As determined by KCTCS Placement Policy or successful completion of ENC 0913. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Remedial - English

ENG English

ENG 100(2) **Course ID: 004574**
English Workshop
Provides parallel and supplemental review of English skills needed for students with an English ACT of 18 or 19 or a Compass placement test score between 70-80 who are also enrolled in ENG 101. If these students withdraw from ENG 100, they must also withdraw from ENG 101. Credit cannot be received by special exam. Lecture: 2 credits (30 contact hours). Prerequisite: ACT score of 18 or 19 with a Compass placement score of 70-80. Corequisite: Enrollment in ENG 101.
Components: Lecture
Attributes: Other

ENG 101(3) **Course ID: 000467**
Writing I
Focuses on academic writing. Provides instruction in drafting and revising essays that express ideas in Standard English, including reading critically, thinking logically, responding to texts, addressing specific audiences, researching and documenting sources. Includes review of grammar, mechanics and usage, Notes: (a) credit not available by special examination; (b) English 101 and 102 may not be taken concurrently; (c) AP credit in the English Language and Composition category for ENG 101 awarded as indicated by AP scoring chart in current KCTCS catalog. Prerequisite: Appropriate writing placement score or ENC 091. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: WC - Written Communication, Course Also Offered in Modules

ENG 102(3) **Course ID: 000468**
Writing II
Emphasizes argumentative writing. Provides further instruction in drafting and systematically revising essays that express ideas in Standard English. Includes continued instruction and practice in reading critically, thinking logically, responding to texts, addressing specific audiences, and researching and documenting credible academic sources. NOTE: Credit is not available by special examination. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: WC - Written Communication, Course Also Offered in Modules

ENG 105(3) **Course ID: 000469**
Instructor Consent Required
Writing: An Accelerated Course
Combines the content of ENG 101 and ENG 102 in an intensive course emphasizing argumentation and library research and fulfills the writing/accessing information requirements. Pre-requisite: ACT English score of 25 or COMPASS English score of 95 AND ACT Reading score of 20 or COMPASS reading score of 90. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: WC - Written Communication

ENG 107(3) **Course ID: 016136**
Writing Craft: Introduction to Imaginative Writing
An introduction to the genres and craft of imaginative writing, including fiction, nonfiction, and poetry. Students will study and practice writing in various modes through composition, peer critique, and research. Lecture and workshop. Offers credit for the UK Core requirement in Intellectual Inquiry in Arts & Creativity. Fulfills ENG pre-major requirement and provides ENG minor credit. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: University Course (University of Kentucky)

ENG 135(3) **Course ID: 000275**
Greek and Roman Mythology in Translation
Examines mythic literature, primarily Greek and Roman texts. Includes selections from primary works such as Works and Days, The Iliad, The Odyssey, Greek tragedy, The Metamorphoses and The Aeneid, with attention to their influence on later literature and culture. Pre-requisite: English ACT 18 and Reading ACT 20 OR completion of transitional reading and writing. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

ENG 161(3) **Course ID: 000470**
Introduction to Literature
Introduces students to an analytical rather than historical approach to literature in order to deepen students' insight into the nature and purpose of literature. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 203(3) **Course ID: 000472**
Business Writing
Provides instruction and experience in writing for business, industry and government. Emphasizes clarity, conciseness, and effectiveness in preparing letters, memos, and reports for specific audiences. Prerequisite: [ENG 101 and (ENG 102 or Consent of Instructor)] or ENG 105. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other, Course Also Offered in Modules

ENG 204(3) **Course ID: 000474**
Technical Writing
Provides instruction and experience in writing for science and technology. Emphasizes clarity, conciseness, and effectiveness in preparing instructions, proposals, and lab reports for specific audiences. Lecture: 3 credits (45 contact hours). Prerequisite: [ENG 101 and (ENG 102 or Consent of Instructor)]or ENG 105.
Components: Lecture
Attributes: Other

ENG 207(3) **Course ID: 000477**
Instructor Consent Required
Creative Writing: (Subtitle Required)
Provides instruction for beginners in the craft of writing, teaching students how to revise work in progress. Involves practice in aspects of craft and promotes experimentation with different forms, subjects, and approaches; outside reading provides models and inspiration. May be repeated under different subtitle to a maximum of six credit hours. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Other

ENG 208(3) **Course ID: 006704**
Creative Writing: Short Story Workshop
Provides students with guidance in the craft of writing short fiction, how to read critically and how to revise work in progress. Includes practice and experimentation with forms, subjects, and approaches to short stories. Outside reading provides models and inspiration. Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Other

ENG 221(3) **Course ID: 000479**
Survey of English Literature I
Acquaints students with significant texts in English literature from the Middle Ages to the early 17th Century. Focuses on the literature in its social, political, and cultural contexts. Lecture: 3 credits (45 contact hours). Prerequisite: ENG 101.
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 222(3) **Course ID: 000481**
Survey of English Literature II
Covers the late 17th Century through the present with emphasis on important writers and cultural backgrounds. Focuses on social, political, and cultural contexts. Lecture: 3 credits (45 contact hours). Prerequisite: ENG 101.
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 230(3) **Course ID: 004530**
Literature and Theme (subtitle required)
Introduces students to close reading and argumentative writing about literature, in relation to a significant theme. Examines selected texts revolving around a single theme, teaching students how to relate texts to contexts, to read closely, and to use basic literary terms and concepts. Considers student writing, particularly devising a thesis, crafting an argument, and learning how to use supporting evidence. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 231(3) **Course ID: 004902**
Literature and Genre (Subtitle required)
Explores one or two different literary forms or genres, i.e. the formal categories into which literary works are placed, including the conventions of each genre and related sub-genres. Considers student writing. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 232(3) **Course ID: 004903**
Literature and Place (Subtitle required)
Explores a number of selected literary texts with special attention to the author's connection to place and how the author's sense of place influences representations of experience. Considers student writing. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 233(3) **Course ID: 004904**
Literature and Identities (Subtitle required)
Explores a number of selected literary texts, with special attention to the construction of personal, ethnic, racial, or national identity and considers how race, class, sexuality, and/or nationality influence representations of experience. Includes attention to student writing. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

ENG 234(3) **Course ID: 004905**
Introduction to Women's Literature
Introduces students to the rich body of women's writing. Explores common and differing themes, attitudes, cultural norms, and gender identity evident in multiethnic, diverse societies through analysis and discussion of texts by women writers. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 251(3) **Course ID: 000483**
Survey of American Literature I
An analysis of significant texts in U.S. literature from the Colonial era to the Civil War focusing on social, political, and cultural contexts. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 252(3) **Course ID: 000485**
Survey of American Literature II
An analysis of significant texts in U.S. literature from the post-Civil War era to the present focusing on its social, political, and cultural contexts. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 261(3) **Course ID: 000487**
Survey of Western Literature from the Greeks Through the Renaissance
Studies the works of major Western authors from the Bible and Ancient Greek literature through the Renaissance. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 262(3) **Course ID: 000489**
Survey of Western Literature from 1660 to the Present
Studies the works by major Western authors from mid-17th century to the present. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 264(3) **Course ID: 000490**
Major Black Writers
Provides a cross-cultural and historical approach to written and oral works by major Black authors of Africa, the Caribbean, and the United States. Includes writers such as Chinua Achebe (Africa), Wilson Harris (Caribbean), and Toni Morrison (USA). Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

ENG 270(3) **Course ID: 000491**
The Old Testament as Literature
Surveys the major types of Old Testament literature in English translation. Examines historical backgrounds while emphasizing careful analysis of literary forms and techniques. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 271(3) **Course ID: 000493**
The New Testament as Literature
Surveys the major types of New Testament literature in English translation. Examines historical backgrounds while emphasizing careful analysis of literacy forms and technique. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 281(3) **Course ID: 000495**
Introduction to Film
Introduces the study of movies as a narrative art and a cultural document. Requires viewing of films outside of class. Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: HUM 281
Attributes: AH - Arts and Humanities

ENG 282(3) **Course ID: 005429**
International Film Studies
Enhances student awareness of how cinema has been used as a multicultural tool for observing/analyzing various aspects of a broad range of societies. Includes critical analysis and interpretation of films from various cultures. Explores the films' countries of origin and the cinematic impacts upon the society and the world. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: HUM 282
Attributes: Cultural Studies, AH - Arts and Humanities

ENG 299(1 - 3) **Course ID: 005345**
Special Topics in English
Examines selected topics in English. Includes, but not limited to, individual authors, specified genres, and defined eras. Prerequisite: ENG 101 or consent of instructor. Lecture: 1 - 3 credits (15-45 contact hours).
Components: Lecture
Attributes: Other

ENG 1011(0.75) **Course ID: 005787**
Writing a Personal Essay
Focuses on academic writing. Provides instruction in reading critically, thinking logically, and responding to texts as a means of planning, drafting and revising essays that express thoroughly developed ideas in Standard English. Prerequisite: ACT score of 18, COMPASS score of 70 or ENC 091. Lecture: 0.75 credits (11.25 contact hours).
Components: Lecture

ENG 1012(0.75) **Course ID: 005788**
Writing a Profile Essay
Focuses on academic writing. Provides instruction and practice in drafting, revising and editing essays which address specific audiences and enlist Standard English. Prerequisite: ENG 1011. Lecture: 0.75 credits (11.25 contact hours)
Components: Lecture

ENG 1013(0.75) **Course ID: 005789**
Writing to Persuade
Focuses on academic writing. Provides review and instruction in formal academic writing conventions, at the work, sentence, paragraph and essay levels. Prerequisite: ENG 1012. Lecture: 0.75 credits (11.25 contact hours)
Components: Lecture

ENG 1014(0.75) **Course ID: 005790**
Writing with Sources
Focuses on academic writing. Provides instruction in reading critically, thinking logically, responding to texts, addressing specific audiences, researching and documenting sources. Prerequisite: ENG 1013. Lecture : 0.75 credits (11.25 contact hours)
Components: Lecture

ENG 1021(1) **Course ID: 005791**
The Language of Argument
Emphasizes argumentative writing. Provides further instruction in argumentation strategies and concepts, leading to the planning and drafting of a preliminary argumentative essay. Prerequisite: ENG 101 or ENG 1014. Lecture 1.0 credits (15 contact hours)
Components: Lecture

ENG 1022(1) **Course ID: 005792**
Argument Style and Design
Emphasizes argumentative writing. Provides instruction and practice in the primary elements of academic writing style, including word choice, evidence selection and organization. Prerequisite: ENG 1021. Lecture: 1 credit (15 contact hours)
Components: Lecture

ENG 1023(1) **Course ID: 005793**
Research and Argument
Emphasizes argumentative writing. Provides instruction in researching, proposing and revising an argumentative position, gathering and synthesizing research findings in support and documenting sources appropriately. Prerequisite: ENG 1022. Lecture: 1 credit (15 contact hours)
Components: Lecture

ENG 2031(1) **Course ID: 015859**
Business Writing Basics
Introduces basic business writing concepts and forms to build a foundation for further study. Pre-requisite: [ENG 101 and (ENG 102 or Consent of Instructor)] or ENG 105. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

ENG 2032(1) **Course ID: 015860**
Specialized Business Messages
Enhances students' skills in business writing through exploration of specialized business messages and modes, including writing for job search, technology-enabled writing, and writing for oral delivery. Pre-requisite: ENG 2031. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

ENG 2033(1) **Course ID: 015861**
Reports and Proposals
Emphasizes lengthy and complex business messages, specifically researching for and writing business reports and business proposals. Pre-requisite: ENG 2032. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

ENM Energy Management

ENM 101(9) **Course ID: 007242**
Energy Industry Fundamentals
Investigates competencies required for employment by various industries that manufacture energy sources. Introduces students to methods of power production, power distribution, and physics principles that are associated with both, and addresses competencies identified by the Center for Energy Workforce Development (CEWD) organization needed for power industries. Qualifies the student to take the CEWD Energy Industry Fundamentals Certification exam. Lecture/Lab: 9.0 credits (150 contact hours).
Components: Lecture
Attributes: Technical

ENM 111(3) **Course ID: 007243**
Sustainability Management
Examines the management of corporations as it relates to sustainability. Includes an overview of energy technology, energy resources, and emerging future energy technologies coupled with social and environmentally related legislation and its effect on corporations triple bottom line (people, profit, and planet. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ENM 121(3) **Course ID: 007244**
Solar Design and Applications
Educates students about alternative solar energy applications which will contribute to a reduction in fossil fuel energy usage and increase cost savings related to conventional energy consumption. Additionally, the course serves to satisfy the competencies needed to qualify students to complete the North American Board of Certified Energy Practitioners (NABCEP) Entry Level Solar Certification. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

ENM 200(3) **Course ID: 007219**
Commercial Energy Analysis
Examines ways to improve the energy efficiency of commercial buildings. Emphasizes the building envelope, lighting, HVAC, motors, appliances, water, electrical, and compressed air systems and their controls with a focus on an energy management system. Examines energy savings and reductions in operational expenses, commercial energy compliance software will be used. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

ENM 210(3) **Course ID: 007220**
Smart Grid Applications
Introduces students to the components needed to renovate the current vertical structured power grid to a smart highway structure power grid that will allow energy to flow in different directions. Focuses on the application of different components within a smart grid system and how they integrate and communicate with each other for smooth transmission of electricity. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

ENM 230(3) **Course ID: 007221**
Building Automation
Introduces students to the components involved in a building automated system (BAS). Investigates the communication and components contained in an integrated building system that controls various components of a building system. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

ENM 250(3) **Course ID: 007222**
Regulatory and Environmental Issues in Energy Management
Observes building energy conservation code compliance adopted by various states. Complements other courses in the energy management program providing additional skills needed for energy efficient buildings. Qualifies students to take the LEED Green Associate exam upon completion of the course. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ENM 260(3) **Course ID: 007223**
Air Conditioning and Refrigeration Regulations
Analyzes the regulations associated with the 608 EPA certification. Outlines techniques and regulations associated with EPA policies. Complements other proposed energy management courses providing additional skills needed for energy efficient buildings. Qualifies students to take the 608 EPA Certification Examination at the completion of the course. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ENM 1011(3) **Course ID: 016357**
Energy Industry Basics
Investigates competencies required for employment by various industries that manufacture energy sources. Addresses the competencies identified by the Center for Energy Workforce Development (CEWD) organization that are needed for energy industries. Combines with the other two modules to qualify students to take the CEWD Energy Industry Fundamentals (EIF) certification exam. Lecture/Lab: 3 credits (60 contact hours).
Components: Lecture

ENM 1012(3) **Course ID: 016359**
Power Creation and Distribution
Introduces students to methods of power production, power distribution, and physics principles that are associated with both. Addresses the competencies identified by the Center for Energy Workforce Development (CEWD) organization that are needed for energy industries. Combines with the other two modules to qualify students to take the CEWD Energy Industry Fundamentals (EIF) certification. Pre-requisite: ENM 1011. Lecture: 3 credits (45 contact hours).
Components: Lecture

ENM 1013(3) **Course ID: 016422**
Energy Emerging Technologies
Introduces students to emerging technologies and careers in the energy industry. Addresses the competencies identified by the Center for Energy Workforce Development (CEWD) organization that are needed for energy industries. Combines with the other two modules to qualify students to take the CEWD Energy Industry Fundamentals (EIF) certification. Pre-requisite: ENM 1012. Lecture: 3 credits (45 contact hours)
Components: Lecture

ENV Environmental Technology

ENV 110(4) **Course ID: 001442**
Introduction to Environmental Technology
Introduction to Environmental Technology provides a background in the historical and current developments in environmental problems, solutions, strategies, and regulations. Students explore the various aspects of water, land, and air pollution, pollution prevention and control, and the role of regulation at the local, state, and federal level.
Components: Lecture
Attributes: Technical

EQM Equine Management

EQM 100(3) **Course ID: 004755**
Introduction to Equine Studies
The intent of this course is to give students a general overview and basic understanding of the horse, its care and management. Course topics include identification, anatomy, health, nutrition, facility and equipment management. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

EQM 120(3) **Course ID: 004756**
Introduction to Commercial Breeding Practices
Introduces prospective horse farm personnel to the breeding farm environment. Includes topics that relate to commercial breeding farm management and the necessary record keeping requirements. Prerequisite: EQM 100 or consent of instructor. Lecture: 3.0 credits (45 contact hours)
Components: Lecture
Attributes: Technical

EQM 140(2) **Course ID: 004757**
Equine Business Management I
Course in equine management that serves to introduce the student to private and commercial horse farm operations, economic trends in the horse industry, international marketplace, capital, credit and risk associated with the equine industry. Prerequisite: EQM 100 and BA 160, or consent of instructor. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

EQM 240(2) **Course ID: 004852**
Equine Business Management II
This course is a continuation of Equine Business Management I. Topics of discussion include types of farm ownership, structure of the horse farm as a business, and evaluation of farm financial performance through production levels, employee management, tax planning, bloodstock value, cash flow and budgeting. Prerequisite: EQM 140 and concurrent enrollment in or successful completion of ACC 201 and ECO 201, or consent of instructor. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

EQM 242(3) **Course ID: 004758**
Equine Law
This course explores the value of legal documents as they relate to commercial and recreational horse/horse farm owners. Topics discussed include review of current legislation governing horse activities, types of legal contracts, liability issues, and security interests. Prerequisite: EQM 100 and BA 267, or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EQM 246(1) **Course ID: 004759**
Current Trends in the Equine Industry
Seminar course in the horse industry designed to provide students with the opportunity to investigate, evaluate and debate key issues confronting horse owners and horse industry participants. Students are encouraged to analyze controversial circumstances in the equine industry and provide insight and logical conclusion. Seminar topics may include such issues as equine adoption, slaughter, transport, medications, account wagering, and public image. Prerequisite: EQM 242 or consent of instructor. Lecture 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical

EQM 250(3) **Course ID: 004760**
Equine Practicum
A supervised, field-based learning experience in the equine industry, including observation and proactive participation in affiliated environments. Students are required to analyze their experiences throughout the semester to develop career objectives and strong interpersonal, communication and leadership skills. Prerequisite: EQM 240, EQM 242, and concurrent enrollment in or successful completion of EQM 246. Practicum: 3 credits (180 contact hours).
Components: Practicum
Attributes: Technical

EQS Equine Studies

EQS 101(3) **Course ID: 007320**
Introduction to the Thoroughbred
Provides a general overview and basic understanding of care and management of the thoroughbred, including identification registration information, conformation, equine behavior and equine facility design and management. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EQS 103(1) **Course ID: 005349**
Racehorse Care
Introduces principles of care for racehorses in a race barn training environment with students learning industry accepted standards and techniques utilized in providing care for racehorses. Lecture: 1.0 credits (15 contact hours).
Components: Lecture
Attributes: Technical

EQS 104(3) **Course ID: 007321**
Racehorse Care Lab
Introduces principles of care for racehorses in a race barn training environment with students learning industry accepted standards and techniques while providing daily care for 1 or 2 racehorses. Pre-requisite or Co-requisite: EQS 103. Lab: 3.0 credits (135 contact hours).
Components: Laboratory
Attributes: Technical

EQS 110(3) **Course ID: 005350**
Basic Equine Physiology
Continues the study of equine care by examining the anatomy and physiology of equine body systems and applications of this knowledge to the raising, training and management of horses in general and racehorses in particular. Includes identification of three muscle fiber types; types, causes and symptoms of colic; thermoregulation; blood components and flow; upper and lower respiratory airway diseases and infectious neurological diseases. Pre-requisite Or Co-requisite: EQS 101 or consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EQS 111(1) **Course ID: 005351**
Introduction to Riding Racehorses
Covers requirements for becoming a licensed professional jockey including physical, mental and emotional components, regulatory agency requirements and necessary life management skills. Includes the history of race riding, identification of important riders in history and noteworthy current riders. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical

EQS 112(4) **Course ID: 005352**
Instructor Consent Required
Racehorse Riding Skills I
Introduces basic horse riding skills and their application to racehorse riding. Presents and requires daily practice of proper rider position at walk, trot, canter, on turn and in straights. Includes discussion and round pen applications of center of gravity of horse, center of gravity of rider and center of gravity of the combination of horse and rider. Teaches proper techniques for cooling out after exercise and or racing. Equine Studies is a selective admission program and enrollment in this course is dependent upon acceptance into the Equine Studies program. Prerequisite: EQS 111 and Consent of Instructor. Pre-requisite Or Co-requisite: EQS 103 and EQS 104. Lecture/Lab: 4.0 credits (150 contact hours).
Components: Lecture
Attributes: Technical

EQS 113(4) **Course ID: 005353**
Instructor Consent Required
Racehorse Riding Skills II
Continues development of riding skills learned in EQS 112 by applying principles to riding racehorses in morning exercise sessions. Includes application of balance to evaluate soundness in racehorses; basic starting gate techniques for riders; principles of teaching young horses to enter and leave the starting gate and techniques for handling unruly horses. Prerequisite: EQS 112 and consent of the instructor. Lecture/Lab: 4.0 credit (150 contact hours).
Components: Lecture
Attributes: Technical

EQS 115(3) **Course ID: 015655**
Equine Health and Medications
Presents principles of health management as it relates to the prevention and treatment of common diseases, parasites and wounds. Pre-requisite: EQS 110 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EQS 121(1) **Course ID: 005497**
Introduction to Breaking and Training Racehorses
Introduces the basic requirements for becoming a licensed racehorse trainer or other equine care worker. Includes historical contributions of prominent owners, breeders, trainers and racehorses that significantly impacted the history of their respective breed. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

EQS 122(3) **Course ID: 005498**
Instructor Consent Required
Yearling Breaking and Management
Introduces the basics of managing and training weanling and yearling racehorses including conformation, movement, pedigree analysis; pre-purchase examinations and practical application of pressure-release techniques of breaking and training young racehorses. Prerequisite: EQS 121 and permission of instructor. Lecture: 1 credit (15 contact hours). Laboratory: 2 credits (90 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

EQS 123(3) **Course ID: 005499**
Breaking and Prepping Two-Year Olds
Covers basics of managing racehorses through their yearling to 2-year old transition. Includes acquiring yearlings and/or two-year olds, breaking, prepping for in-training sales and/or racing, concepts of nutrition for growing equine athletes, cardiovascular conditioning, muscle fitness, sale presentation and injuries of two-year olds in race training. Pre-requisite Or Co-requisite: EQS 103: Racehorse Care EQS 104: Racehorse Care Lab. Lecture/Lab: 3.0 credits (105 contact hours).
Components: Lecture
Attributes: Technical

EQS 125(3) **Course ID: 005804**
Equine Nutrition
Presents principles of nutritional management as it relates to the overall health and performance of the horse. Prerequisite: EQS 110 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EQS 130(3) **Course ID: 005354**
Introduction to the Racing Industry
Introduces students to racing industry organizations, personnel, facilities and the rules of racing. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EQS 200(3) **Course ID: 005500**
Lameness in Racehorses
Expands on basic equine anatomy with emphasis on normal function of front and rear legs and methods of evaluating deviations from normal function presented as lameness in racehorses. Also discusses response to injury, forms of therapy and training methods for horses returning from injury. Prerequisite: EQS 110 or permission of instructor. Corequisite: Concurrent enrollment in EQS 110. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EQS 212(3) **Course ID: 005503**
Instructor Consent Required
Racehorse Riding Principles
Builds on basic skills learned in EQS 113 and adds principles of riding racehorses on a training track in company of other horses and riders, teaching horses to pass others, working in company, proper use of riding crop and breaking from a starting gate. Prerequisite: EQS 113 and permission of instructor. Lecture: 1 credit (15 contact hours). Laboratory: 2 credits (90 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

EQS 213(2) **Course ID: 005504**
Instructor Consent Required
Racehorse Riding Techniques
Teaches advanced fundamentals of race riding such as breezing racehorses alone and in company, using proper riding techniques at each point in a race, breaking horses from the starting gate, and practicing race riding skills in training races. Prerequisite: EQS 212 and consent of instructor. Lecture/Lab: 2.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

EQS 215(3) **Course ID: 005505**
Instructor Consent Required
Life Skills for Jockeys
Prepares student for life as a professional jockey. Includes integration of principles of nutrition into an eating plan that will maintain weight and health. Introduces concepts of practical financial management, insurance and retirement planning on a jockey's salary. Ties together basic riding skills with interpersonal skills necessary for a successful life as a professional jockey. Prerequisite: EQS 212 and permission of instructor. Corequisite: EQS 212. Lecture: 3 credits (45 contact hours).
Components: Lecture

EQS 223(4) **Course ID: 005507**
Training Principles and Practices
Examines techniques of training racehorses and compares effectiveness of different racehorse training methods including interval training, Quarter Horse training, steeplechase training and standard Thoroughbred training. Includes shoeing, veterinary examinations of racehorses and alternatives to training methods. Requires students to develop a training plan for assigned North American Racing Academy (NARA) racehorses, supervise first year NARA student "employees," participate in NARA training races and develop a plan to communicate with owners regarding the status of horses in training. Prerequisite: EQS 123. Lecture/Lab: 4.0 credit (150 contact hours).
Components: Lecture
Attributes: Technical

EQS 240(3) **Course ID: 007322**
Equine Legal and Business Principles
Provides legal insights and practical tips for a successful horse business. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EQS 299(1 - 9) **Course ID: 005626**
Equine Studies Cooperative Education
Provides a planned and evaluated work experience related to the student's educational objective for which the student receives both financial remuneration and academic credit. While the maximum amount of credit granted for Equine cooperative Education experience varies by curriculum, the amount may never exceed nine hours in Associate in Applied Science Degree, diploma, or certificate program. Is available only to students enrolled in Associate of Applied Science in Equine Studies, Equine Studies Diploma and certificate program that list Equine Cooperative Education as an approved course. Prerequisite: Consent of Instructor. Co-op: 1.0 - 9.0 credits (60 - 540 contact hours).
Components: Co-Op
Attributes: Technical

ESL English as a Second Language

ESL 10(4) **Course ID: 006638**
Introduction to Reading and Vocabulary
High-beginning level students will improve fundamental reading skills and expand vocabulary as they interact with level-appropriate texts. Students will be recommended to this course based on the ESL placement examination.
Components: Lecture
Attributes: English for Foreign Students

ESL 11(4) **Course ID: 005308**
Beginning Listening and Speaking
High-beginning level students will improve the ability to speak and understand English in simple everyday and academic situations. The course will provide practice in pronunciation and basic oral communication functions. Beginning academic listening and speaking skills will also be covered. Students will be recommended to this course based on the ESL placement examination. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: English for Foreign Students

ESL 12(4) **Course ID: 005230**
Intermediate Listening and Speaking
Low-intermediate level ESL students will improve comprehension and communication in English on a variety of everyday topics and in the academic setting. Students will develop and practice techniques for greater composure and confidence in oral expression. Practice will also be provided in pronunciation and intonation. Students will be recommended to this course based on the ESL placement examination or through completion of ESL 11. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: English for Foreign Students

ESL 13(4) **Course ID: 005307**
Advanced Listening and Speaking
High-intermediate level ESL students will improve comprehension and communication in both social and academic settings. Instruction will include improving listening skills for academic note taking and small group discussion. Students will be expected to lead and share in class discussions based on reading and authentic listening materials. Students will also present orally in front of the class. Students will be recommended to this course based on the ESL placement examination or through completion of ESL 12. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: English for Foreign Students

ESL 20(4) **Course ID: 005216**
Reading Improvement and Vocabulary Development for Low-Intermediate Non-Native English Speakers
Low-intermediate level students will review fundamental reading skills, learn and practice higher order reading skills, expand vocabulary and increase reading efficiency as they interact with level-appropriate texts. Prerequisite: placement test. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: English for Foreign Students

ESL 30(4) **Course ID: 005078**
College Reading and Vocabulary Development for High-Intermediate Non-Native English Speakers
High-intermediate level ESL students will master fundamental reading skills, improve critical reading, and further vocabulary development. Students will be introduced to a variety of genres, such as newspaper articles and essays, poems, short stories, charts, graphs and college-level content textbooks. Through the selected readings, this course will foster cultural awareness, comprehension, and interaction. The readings and activities introduced in the course will allow students to engage in meaningful dialogue, and in the process, refine their English skills. Prerequisite: ESL 020 or placement test.
Components: Lecture
Attributes: English for Foreign Students

ESL 31(3) **Course ID: 004037**
Beginning Conversation for Non-Native English Speakers
Beginning level ESL students will learn basic conversation and practice basic sounds and intonation patterns.
Components: Lecture
Attributes: English for Foreign Students, Course Also Offered in Modules

ESL 51(3) **Course ID: 004043**
Introduction to College Reading for Non-Native English Speakers
Beginning-level students will acquire or strengthen fundamental reading skills and expand vocabulary as they interact with level-appropriate texts.
Components: Lecture
Attributes: English for Foreign Students

ESL 52(3) **Course ID: 004044**
Improved College Reading for Low-Intermediate Non-native English Speakers
Intermediate-level students will review fundamental reading skills, learn and practice higher order reading skills, expand vocabulary and increase reading efficiency as they interact with level-appropriate texts. Prerequisite: ESL 51.
Components: Lecture
Attributes: English for Foreign Students

ESL 53(3) **Course ID: 004045**
High-Intermediate Reading for Non-Native English Speakers
High-intermediate level ESL students will master fundamental reading skills. They will be introduced to a variety of genres, such as newspaper articles and essays, poems, short stories, charts, graphs and many other. In addition, this course will foster cultural awareness, understanding and interaction. Through the readings and activities introduced in the course students will engage in meaningful dialogue, and in the process, refine their English skills. Prerequisite: ESL 052 or placement test.
Components: Lecture
Attributes: English for Foreign Students

ESL 61(4) **Course ID: 004046**
Foundations of College Writing I for Non-Native English Speakers
Beginning level ESL students are introduced to composition with an emphasis on clarity, organization, development and correctness. Comprehensive review of mechanics, grammar and spelling as these apply to their own writing is also addressed in this course.
Components: Lecture
Attributes: English for Foreign Students

ESL 62(4) **Course ID: 004047**
Foundations of College Writing II for Non-Native English Speakers
Low-intermediate level ESL students continue to enhance their composition skills by receiving instruction in the following: the writing process, organization, multi-paragraph writings, editing, and critical reading. Grammar instruction focuses on key structures and provides a springboard for expanding students' abilities in all language skills. Prerequisite: ESL 61.
Components: Lecture
Attributes: English for Foreign Students

ESL 63(4) **Course ID: 004048**
Foundations of College Writing III for Non-Native English Speakers
ESL 63 is designed to help students prepare for ENG 101. High-intermediate level ESL students continue to work on the writing process, editorial improvement and critical reading. Grammar instruction includes advanced grammatical points, such as modal auxiliaries, gerunds, infinitives, adjective and noun clauses. Prerequisite: ESL 62 or placement test.
Components: Lecture
Attributes: English for Foreign Students

ESL 71(3) **Course ID: 007210**
College Writing I for Non-Native Speakers
Introduces writing modes, including description, narration, process, and persuasion; presents methods of pre-writing; emphasizes development of thesis statements, topic support, and organization; describes basic concepts of verb tense and syntax. Credit is not given to students who have received credit for ESL 61. Pre-requisite: Placement According to KCTCS Assessment and Placement Policy. Lecture: 3.0 credit hours (45 contact hours).
Components: Lecture
Attributes: Remedial - English, English for Foreign Students

ESL 72(3) **Course ID: 007046**
College Writing II for Non-Native Speakers
Introduces writing modes, including description, narration, comparison and contrast, cause and effect, process, and persuasion; presents methods of pre-writing; emphasizes development of thesis statements, topic support, and organization; short essay organization is emphasized. A student cannot receive credit for both ESL 62 and ESL 72. Pre-requisite: Currently appropriate assessment scores and a writing sample or completion of ESL 71. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Remedial - English, English for Foreign Students

ESL 81(3) **Course ID: 007211**
College Grammar I for Non-Native Speakers
Introduces basic verb tenses, formation of questions, modals, clauses, and parts of speech to non-native speakers of English. Incorporates instructional methods that are designed for non-native speakers of English. Credit is not given to students who have received credit for ESL 61. Pre-requisite: Placement According to KCTCS Assessment and Placement Policy. Lecture: 3.0 credit hours (45 contact hours).
Components: Lecture
Attributes: Remedial - English, English for Foreign Students

ESL 82(3) **Course ID: 007047**
College Grammar II for Non-Native Speakers
Introduces intermediate-level verb tenses, formation of questions, modal verbs, clauses, count and non-count nouns, and parts of speech to non-native speakers of English. Incorporates instructional methods that are designed for non-native speakers of English. A student cannot receive credit for both ESL 82 and ESL 62. Pre-requisite:Currently appropriate assessment scores or completion of ESL 81. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Remedial - English, English for Foreign Students

ESL 90(4) **Course ID: 005079**
Beginning Writing
High-beginning level ESL students will learn composition skills by receiving instruction in the following: the writing process, organization, sentence development, paragraph writing, and editing. Basic instruction in grammar provided. Students will be recommended to this course based on the ESL placement examination.
Components: Lecture
Attributes: English for Foreign Students

ESL 91(4) **Course ID: 005080**
Intermediate Writing for Non-Native English Speakers
Low-intermediate level ESL students will enhance their composition skills by receiving instruction in the following: the writing process, organization, multi-paragraph writings, editing, and critical reading. Basic instruction in grammar provided. Prerequisite: placement test.
Components: Lecture
Attributes: English for Foreign Students

ESL 92(4) **Course ID: 005082**
Advanced Writing for Non-Native English Speakers
ESL 92 is designed to help students prepare for ENG 101. High-intermediate level ESL students continue to work on the writing process, editorial improvement, and critical reading. Students will be introduced to documenting sources. Grammar instruction includes advanced grammatical points. Prerequisite: ESL 91 or placement test.
Components: Lecture
Attributes: English for Foreign Students

ESL 100(3) **Course ID: 016566**
Listening for Academic Purposes
This course cultivates skills to improve academic speaking performance for non-native speakers of English enrolled in American university classes. Special attention is given to effective academic presentations, interpersonal communication skills, pronunciation and accent. This course is designed to raise students' speaking skills so they can participate in academic settings with competencies similar to their native-speaker peers. Pre-requisite: KCTCS assessment instrument scores as shown in Mandatory Placement policy. Lecture: 3.0 credits (45 contact hours)
Components: Lecture
Attributes: University Course (University of Kentucky)

ESL 110(3) **Course ID: 016517**
Speaking for Academic Purposes
This course cultivates skills to improve academic speaking performance for non-native speakers of English enrolled in American university classes. Special attention is given to effective academic presentations, interpersonal communication skills, pronunciation and accent. This course is designed to raise students' speaking skills so they can participate in academic settings with competencies similar to their native-speaker peers. Pre-requisite: KCTCS assessment instrument scores as shown in Mandatory Placement policy. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: University Course (University of Kentucky)

ESL 120(3) **Course ID: 016568**
Reading for Academic Purposes
This course cultivates skills to improve academic reading performance for non-native speakers of English enrolled in American university classes. Special attention is given to cross-disciplinary academic reading, reading rates and speeds, effective research methods, documentation and essay exams skills. This course is designed to raise students' reading skills so they can participate in academic settings with competencies similar to their native-speaker peers. Pre-requisite: KCTCS Assessment instrument scores as shown in Mandatory Placement policy. Lecture: 3.0 credits (45 contact hours)
Components: Lecture
Attributes: University Course (University of Kentucky)

ESL 130(3) **Course ID: 016518**
Writing for Academic Purposes
This course cultivates skills to improve academic writing performance for non-native speakers of English enrolled in American university classes. Special attention is given to cross-disciplinary research, collaboration, the writing process, content organization and development, editing and proofreading. This course is designed to raise students' writing skills so they can participate in academic settings with competencies similar to their native-speaker peers. Pre-requisites: KCTCS assessment instrument scores as shown in Mandatory Placement policy. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: University Course (University of Kentucky)

ESL 0311(1) **Course ID: 007396**
ESL Greetings & Farewells
Highlights greetings and introductions, giving and receiving personal information, and making plans and discussing the future. Introduces expressing the future using the verb "to go." Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: English for Foreign Students

ESL 0312(1) **Course ID: 007397**
ESL Shopping & Eating
Focuses on reading a menu, ordering food, and activities related to shopping. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: English for Foreign Students

ESL 0313(1) **Course ID: 007398**
ESL Making Appointments & Medical Needs
Focuses on making appointments, going to the doctor. Introduces numbers, dates, time, addresses, and using the telephone. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: English for Foreign Students

ESP Energy Systems

ESP 101(3) **Course ID: 005324**
Introduction to Energy Systems
Introduces energy generating systems including solar, wind, bioenergy, geothermal, hydroelectric, hydrogen-based, petroleum-based, coal, and nuclear. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ESP 110(3) **Course ID: 005491**
Petroleum Based Fuels
Introduces the major petroleum based fuels including energy content, uses, availability, distribution methods, storage, and future impact of each fuel. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ESP 120(3) **Course ID: 005492**
Power Plant Chemistry
Introduces chemical processes relating to power plant operations including basic chemical principles and specific chemistry of fuels, boiler and cooling water, steam, water treatment and environmental controls. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ESP 130(3) **Course ID: 005493**
Electrical Concepts
Provides an overview of the electrical concepts needed to operate a fossil-fueled power plant stressing in-plant electrical distribution and safe operation. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ESP 132(3) **Course ID: 005494**
Electrical Machinery and Controls
Provides detailed training in the operation of electrical machinery and controls in a fossil-fueled power plant including proper operation during normal operations, startups and shutdowns, and transient. Prerequisite: ESP 130. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ESP 211(3) **Course ID: 005320**
Power Plant Operations I
Introduces overall power plant operations including electrical generation, fuels and steam generation. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ESP 212(3) **Course ID: 005323**
Power Plant Operations II
Provides detailed training in the operations of boilers, fuel, air, combustion and emissions systems, including auxiliary equipment of a coal-fired (fossil fueled) power plant. Proper operation during normal operations, startups and shutdowns, and transient conditions will be stressed. Prerequisite: ESP 211 or consent of the instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ESP 213(3) **Course ID: 005322**
Power Plant Operations III
Provides detailed training in the operations of water, steam, turbines and generator systems of a coal-fired (fossil fueled) power plant stressing proper operation during normal operations, startups and shutdowns, and transient conditions. Prerequisite: ESP 211 or consent of the instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ESP 214(3) **Course ID: 005321**
Power Plant Operations IV
Provides detailed training in the operation of the auxiliary components of a power plant, including valves, traps, actuators, pumps, couplings, air compressors, seals, lubrication systems, air ejectors, heat exchangers, and switches. Proper operation of each type of component and its function in the plant will be stressed. Prerequisite: ESP 211 or consent of the instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ESP 220(3) **Course ID: 005495**
Power Plant Thermodynamics
Introduces basic thermodynamic concepts and the applications of thermodynamics in a fossil-fueled power plant. Prerequisite: PHY 151 or higher. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ESP 280(3) **Course ID: 005496**
Capstone in Energy Systems
Serves as the capstone course for the Energy Systems program by integrating prior learning into a single integrated learning experience. Requires planning, research, and completion of both individual and team-based reports based on real-world problems or projects in the Energy Systems field. Prerequisite: ESP 213. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EST Environmental Science Technology

EST 150(4) **Course ID: 004744**
Introductory Ecology
Introduces basic concepts and current applications of ecology relevant to environmental issues. Emphasizes relationships between organisms and the environment; influencing factors affecting distribution and abundance; population structure and regulation; energy flow and nutrient cycling through the environment; and, development, structure, and response to distribution of organismal communities. Includes weekly laboratories to provide hands-on field experiences to reinforce concepts learned in lecture. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: SL - Science Laboratory, SN - Science

EST 160(3) **Course ID: 004745**
Hydrological Geology
This course provides an introduction to geology and hydrology with an emphasis on understanding natural processes and the effects of human activities. Major topics covered include: plate tectonics; formation and classification of rocks and minerals; the processes affecting the hydrologic cycle; soil formation and classification; subsurface geology and groundwater movement; stream formation and flow; floods; and human impacts to stream hydrology and morphology. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

EST 170(2) **Course ID: 004746**
Environmental Sampling Laboratory
A laboratory course which provides the fundamentals in evaluating and designing sampling approaches for different situations and different media. The course will provide students with field experience in sampling soil, surface water, groundwater, and benthic invertebrates. Laboratory: 2 credits (60 contact hours). Prerequisite: EST 150 or consent of instructor.
Components: Laboratory
Attributes: Technical

EST 220(3) **Course ID: 004747**
Pollution of Aquatic Ecosystems
This course examines freshwater ecosystems and typical aquatic pollutants. Discussion topics focus on the sources, transport, fate, and effects of common pollutants such as domestic wastewater, metals, acidity, and pesticides. Methods to minimize or eliminate the sources and effects of pollutants are also explored. Prerequisite or concurrent: EST 150, EST 160, CHE 105, and CHM 105 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EST 225(3) **Course ID: 005054**
Freshwater Invertebrates
An overview of the morphology, life history and ecology of freshwater invertebrates and their habitats as well as their importance and role in stream protection and restoration. Students will learn how to collect, preserve and identify freshwater invertebrates. Students will learn how to calculate and analyze biometrics used to infer stream quality. Prerequisite: EST 150.
Components: Lecture
Attributes: Technical

EST 230(2) **Course ID: 004748**
Aquatic Chemistry Laboratory
This course provides focused study on the chemistry of water. The course will provide students with laboratory experience in analyzing surface, ground, and drinking waters for a variety of chemical constituents. Laboratory: 2 credits (60 contact hours). Prerequisite: CHE 105, CHM 105, and prerequisite or concurrent EST 220.
Components: Laboratory
Attributes: Technical

EST 240(4) **Course ID: 004749**
Sources and Effects of Air Pollution
This course provides an introduction to the study of ambient and indoor air pollution with an emphasis on sources, dispersion, and health and welfare effects of the major pollutants. Both regulatory and engineering controls of stationary and mobile sources are explored. A laboratory provides experience with sampling and analysis of air pollutants. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (30 contact hours). Prerequisite: EST 150 and CIT 130, or equivalent, or consent of instructor.
Components: Laboratory, Lecture
Attributes: Technical

EST 250(3) **Course ID: 004750**
Solid and Hazardous Waste Management
This course examines methods of managing solid and hazardous waste, with an emphasis on pollution prevention. Topics covered include relevant legislation, recycling, incineration, landfill operations, management of radioactive waste, remediation of waste sites and site worker health and safety. Prerequisite: EST 150 and EST 160, or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EST 260(2) **Course ID: 004751**
Environmental Analysis Laboratory
This course provides an introduction to the fundamentals of analyzing environmental media. The course will provide students with laboratory experience in analyzing soil, surface water, groundwater, air and microbial samples. Laboratory: 2 credits (60 contact hours). Prerequisite: CHE 105, CHM 105 and prerequisite or concurrent EST 170.
Components: Laboratory
Attributes: Technical

EST 270(3) **Course ID: 004752**
Environmental Law and Regulation
This course is structured to provide the student with a basic understanding of major current federal and state environmental legislation and regulation with an emphasis on those portions that affect the regulated community. The course will also include an examination of the role of common law and the branches of government in environmental protection. Prerequisite or concurrent: EST 220, EST 240, and EST 250 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EST 280(1) **Course ID: 004753**
Environmental Trends Seminar
This course provides an examination of current approaches used to address a variety of environmental problems. Students will hear and critique presentations from professionals in the environmental field. Students will also research and give a presentation on a specific method to minimize or eliminate a current environmental problem. Prerequisite or concurrent: EST 160, EST 150, COM 181 or COM 252, EST 170, EST 220, EST 260, and EST 250 or consent of instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical

EST 299(1 - 3) **Course ID: 004754**
Instructor Consent Required
Selected Topics in Environmental Science Technology
A special project or experience in Environmental Science will be selected to enhance core material in the Environmental Science Technology program. It provides the student an opportunity for independent study or specialized instruction as approved by an instructor. This course may be repeated to a maximum of 6 hours. Prerequisite: Consent of instructor. Lecture: 1-3 credits (15-45 contact hours).
Components: Lecture
Attributes: Technical

ETT Electrical Technology

ETT 110(4) **Course ID: 004231**
Voice & Data Installer Level I
A comprehensive orientation to the telecommunication industry. Provides entry-level telecommunications cabling installers with the background, knowledge, and basic skills needed to function effectively on the job. Designed for those with little or no telecommunication installation experience. Prerequisite: Basic physics/electricity courses are recommended but not required. Lecture: 4 credits (75 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ETT 112(3) **Course ID: 004232**
Basic Electrical Theory: Telenetworking
Introduces the theory of electricity, magnetism, and the relationship of voltage, current, resistance, and power in electrical circuits as related to telecommunications. Designed to develop an understanding of alternating and direct current fundamentals. Students will apply formulas to analyze the operation of AC and DC circuits. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ETT 113(1) **Course ID: 004233**
Basic Electrical Theory Lab
Allows the student to do hands-on applications of the theories and fundamentals learned in ETT 112. Corequisite: ETT 112. Laboratory: 1 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

ETT 114(4) **Course ID: 004234**
Voice & Data Installer Level II
Designed for experienced telecommunications installers who wish to expand knowledge of the industry, learn new skills, and continue to advance professionally. The Installer Level 2 course requires two to five years of recent, verifiable telecommunications/low voltage cabling experience. In addition, several sections from the Installer Level 1 course will be covered comprehensively in this course. Prerequisite: ETT 110 with a grade of "C" or greater. Lecture: 3 credit (45 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ETT 116(3) **Course ID: 004235**
Fiber Optics Systems
Provides a technical level of understanding in the areas of networking connectivity, data communications concepts and communication protocols. Communications and networking concepts including hardware, software, and transmission media; access methods and protocols; and network configurations area are addressed. Emphasis is on local area networks, and students will install a basic network. Prerequisite: ETT 110 or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EX Experiential Education

EX 196(1 - 6) **Course ID: 000747**
Instructor Consent Required
Experiential Education
A planned and evaluated learning work experience for which the student receives academic credits and may receive financial remuneration. The work experience may be related to the student's major or may be exploratory in nature. One credit may be awarded for each 40 hours of work experience. The course may be repeated for a maximum of 6 credits and is available on a Pass/Fail basis only. This course is open only to transfer, nondegree and undecided students. Lecture: Variable; Laboratory: Variable. Prerequisite: Consent of instructor.
Components: Laboratory, Lecture
Attributes: Technical

FAM Family Studies

FAM 252(3) **Course ID: 000662**
Introduction to Family Science
Introduces the scientific study of the family, including important theoretical frameworks in family science, historical trends in marriage and family life, gender role theory, family life theory, parenthood, communication, economics of family life, conflict, divorce, step-families and step-parenting, and family strengths. Analyzes contemporary family issues and requires informed, written positions on those issues. Prerequisite: 3 hours of social or behavioral science or consent of instructor.
Components: Lecture
Attributes: SB - Social Behavior Science

FAM 253(3) **Course ID: 000666**
Human Sexuality: Development, Behavior, and Attitudes
Studies human sexuality, including the process of gender and attitudes, sexual response patterns, sexual behavior, and attitudes. Prerequisite: 3 hours in social or behavioral science or consent of instructor.
Components: Lecture
Attributes: SB - Social Behavior Science

FAM 255(3) **Course ID: 000059**
Child Development
Overviews the various aspects of development (physical, social, emotional, intellectual) for children ages birth through adolescence. Emphasizes techniques of directed observation. Prerequisite: 3 hours of social or behavioral science or consent of instructor.
Components: Lecture
Attributes: Other, Technical

FHM Health Mathematics Fundamental

FHM 100(2) **Course ID: 001463**
Dosage Calculations
Provides an overview of basic math skills, a thorough knowledge of the system of measurement and conversion, and application skills to perform dosage calculations. Emphasis is placed on unit analysis to calculate medication dosages.
Components: Lecture
Attributes: Technical

FLK Folk Studies

FLK 276(3) **Course ID: 004779**
Introduction to Folk Studies
An introduction to the study of folk traditions in different contexts, focusing on the concepts of folk group, cultural relativism, fieldwork, meaning and function, and the genres of folk narrative, folksong, folk custom and traditional material culture. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Arts and Humanities

FLK 280(3) **Course ID: 004780**
Cultural Diversity in the United States
Focuses on understanding, interpretation, and appreciation of the multicultural nature of American society. Emphasis on the varieties of cultural expression, customs and world view practiced by regional, ethnic, racial and sectarian cultures. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, Other

FLM Filmmaking

FLM 112(4) **Course ID: 016196**
Filmmaking: Treatment to Short Screen Play
Provides project-based instruction on the basics of filmmaking. Familiarizes students with the process of creating a film treatment and proposal, and writing and revising a screenplay. Co-requisite: (FLM 122 AND FLM 132 AND FLM 140) OR Consent of Instructor. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

FLM 122(4) **Course ID: 016197**
Filmmaking: Storyboard through Production
Provides project-based instruction on basics of film production. Familiarizes students with directing, lighting, set designing, cinematography, and audio. Co-requisite: (FLM 112 AND FLM 132 AND FLM 140) OR Consent of Instructor. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

FLM 132(4) **Course ID: 016198**
Filmmaking: Editing through Distribution
Provides experience in graphic design, editing, music production, and promotion. Emphasizes preparation for entry-level positions in the industry. Co-requisite: (FLM 112 AND FLM 122 AND FLM 140) OR Consent of Instructor. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

FLM 140(2) **Course ID: 016199**
Filmmaking: Lab
Covers the lab portion of all topics included in FLM 112, FLM 122, and FLM 132. Consists of guest lecturers, group projects and hands on experience in film, ranging from pre-production and storyboards to post production. Co-requisite: (FLM 112 AND FLM 122 AND FLM 132) OR Instructor Consent. Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

FLM 190(3) **Course ID: 016193**
Film Boot Camp
Covers the organization and setup of a film production in the form of a film `boot camp.' Includes lecture from experts in the field. Provides real world experience for first year students in the roles of Production Assistant, Assistant Director, Camera Assistant, and grip, and for second year students in the roles of Cinematographer, Director of Photography, Producer, and Director. Focuses on completion of a short film production. Lecture: 1.0 credits (15 contact hours). Lab: 2.0 credits (60 contact hours)
Components: Lecture
Attributes: Technical

FLM 210(3) **Course ID: 007265**
Screenwriting
Introduces the fundamentals of screenwriting including scenic description, character development, plot twists, turn-arounds, three-act structure and revisions. Reviews writing for camera. Demonstrates the use of proper formatting and the connection between the screenplay, the director and the production team. Connects students to active screenwriters through collaboration and networking. Prepares students for work with the Writers Guild and other professional organizations. Note: It is recommended that the student complete ENG 101 prior to taking this course. Pre-requisite:(FLM 112 AND FLM 122 AND FLM 132 AND FLM 140) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

FLM 260(3) **Course ID: 007266**
Cinematography
Prepares students for careers in camera, directing and art design in the motion picture industry through introduction to composition, camera movement and prime lenses. Integrates classroom study of lens history and optics, as well as project-based, hands-on application of knowledge and practice. Demonstrates how lens selection and composition affects story development and viewer response. Pre-requisite: (FLM 112 AND FLM 122 AND FLM 132 AND FLM 140) OR Consent of Instructor. Lecture/Lab: 3.0 credits (75 contact hours).
Components: Lecture
Attributes: Technical

FLM 291(3) **Course ID: 016194**
Cinematic Arts Internship
Prepares students for entry into Bachelor of Fine Arts programs and film schools nationwide or for the workforce in film production. Amplifies knowledge and practice in screenwriting, producing, directing, camera, lighting, set design, graphics, audio, acting, music, and editing. Provides on-the-job experience in the film industry, requiring a minimum of 180 contact hours of appropriate experience approved by the faculty member. Requires a learning contract, signed by the student, faculty member, and supervisor. Provides experience writing a resume, attending guest lectures, and on-the-job training. Pre-requisite: (FLM 112 AND FLM 122 AND FLM 132 AND FLM 140) OR Consent of Instructor. Pre-requisite or Co-requisite: (FLM 260 AND FLM 299) OR Consent of Instructor. Practicum: 3.0 credits (180 contact hours).
Components: Practicum
Attributes: Technical

FLM 299(3) **Course ID: 016195**
Special Topics in FLM: TOPIC
Explores concepts and/or skills from special areas in film theory focusing on a specific genre. Note: May be repeated with different topics to a maximum of 6 credit hours. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

FNS Funeral Services

FNS 101(2) **Course ID: 006947**
Introduction to Funeral Service
Introduces the history, principles, and practices of funeral service with attention to the fundamental skills, knowledge, ethics, aptitudes, and obligations of a funeral service professional in the United States. Pre-requisite: Admission to Funeral Service Program or consent of instructor. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

FNS 110(2) **Course ID: 006948**
Funeral Service Management and Merchandising
Surveys management and merchandising techniques as related to the operation of a funeral business.Pre-requisite: Admission into Funeral Service Program. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

FNS 115(3) **Course ID: 006949**
Funeral Service Directing
Covers the funeral service procedures, practices and customs of various religions and groups in the United States, as well as the techniques and considerations needed in conducting such services. Pre-requisite: Admission to the Funeral Service Program. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

FNS 120(4) **Course ID: 006950**
Funeral Service Counseling
Examines psychological concepts in the areas of grief, bereavement, and mourning with particular emphasis on the roles of the funeral director in relation to these concepts as well as a facilitator of the funeral service, crisis intervener, and after care counselor. Pre-requisite: Admission to the Funeral Service Program. Lecture: 4.0 credits (120 contact hours).
Components: Lecture
Attributes: Technical

FNS 130(2) **Course ID: 006951**
Business and Mortuary Law
Surveys law and the judicial system as these relate to the operation of a business, focusing on those statutes and regulations pertinent to funeral directors and morticians. Pre-requisite: Admission to the Funeral Service Program. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

FNS 131(3) **Course ID: 006952**
Funeral Service Ethics, Regulations, and Statutes
Surveys general principles of mortuary and business law. Emphasis is on ethical practice. Compliance with pre-need and at-need regulatory agencies included. Pre-requisite: Admission to the Funeral Service Program. Lecture: 3.0 credits (45 contact hours).
Components: Laboratory
Attributes: Technical

FNS 150(3) **Course ID: 006953**
Pathology
Investigates pathological changes related to disease processes. Discusses the effect of physical and chemical trauma on the human body, particularly manifestations relevant to mortuary science. Surveys the major diseases. Pre-requisite: Admission to the Funeral Service Program and BIO 225 or equivalent. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

FNS 165(2) **Course ID: 006954**
Sociology of Funeral Service
Surveys social phenomena that affect all elements of funeral service, including family and social structure and other factors that relate to funeral service. Pre-requisite: Admission to the Funeral Service Program. PSY 110 or SOC 101. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

FNS 170(4) **Course ID: 006955**
Thanatochemistry
Surveys the basic principles of chemistry as they relate to funeral service. Stresses the chemical principles and precautions involved in sanitation, disinfection, public health and embalming practice. Reviews the government regulation of chemicals currently used in funeral service. Pre-requisite: Admission to the Funeral Service Program. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

FNS 240(4) **Course ID: 006956**
Restorative Arts
Emphasizes restorative arts as applied to funeral services, including anatomical modeling, and expression. Emphasizes familiarization with tools, legal aspects, materials, and techniques. Pre-requisite: Admission to the Funeral Service Program and BIO 135. Lecture: 3.0 credits (45 contact hours) Lab: 1.0 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

FNS 250(4) **Course ID: 006957**
Embalming
Emphasizes procedures, requirements, equipment, and materials involved in the embalming process. Pre-requisite: Admission to the Funeral Service Program and FNS 170. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

FNS 255(1) **Course ID: 006958**
Embalming Practicum
Provides practical experience in embalming and funeral directing in a mortuary or funeral home environment under the supervision of a licensed embalmer and/or funeral director. Pre-requisite: Admission to the Funeral Service Program and FNS 250. Practicum: 1.0 credit (90 contact hours).
Components: Practicum
Attributes: Technical

FNS 275(2) **Course ID: 006959**
Funeral Service Projects
Provides comprehensive review of entire Funeral Service curriculum in preparation for the National Board Examination and eligibility for all state and national licensure requirements. Addresses current events, skills, knowledge and/or attitudes and behaviors pertinent to the occupation and relevant to the professional development of the student. Pre-requisite: Admission to the Funeral Service Program. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

FPX Fluid Power

FPX 100(3) **Course ID: 001464**
Fluid Power
Includes fluid power theory, component identification and application, schematic reading, and basic calculations related to pneumatic and hydraulic systems and their operations. Corequisite: FPX 101 or Consent. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

FPX 101(2) **Course ID: 001465**
Fluid Power Lab
Provides practical experiences in the study of fluid power theory, hydraulics and pneumatics component identification, schematic reading, and basic calculations related to hydraulic and pneumatic systems and their operations. Corequisite: FPX 100 or Consent of Instructor. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Same As Offering: FPX 101 Attributes: Course Also Offered in Modules, Technical

FPX 1001(0.3) **Course ID: 005625**
Introduction to Fluid Power
Introduces the basic concepts of fluid power and provides an opportunity to discuss the application of those concepts in the development of hydraulic and pneumatic systems. Includes a general discussion on the safe working practices required with fluid power systems. Corequisite: FPX 1011 or Consent. Lecture: .3 credit (4.5 contact hours).
Components: Lecture

FPX 1002(0.3) **Course ID: 005674**
Introduction to Hydraulic System Maintenance
Familiarizes the student with hydraulic fluids, reservoirs, and filters. Covers the methodologies required when servicing a typical hydraulic system. Includes a general discussion on the safe working practices required with fluid power systems. Prerequisite: [(FPX 1001 and FPX 1011) with a grade of "C" or better] or Consent. Corequisite: FPX 1012 or consent. Lecture: 0.3 credit (4.5 contact hours).
Components: Lecture

FPX 1003(0.4) **Course ID: 005675**
Introduction to Pneumatic System Maintenance
Introduces pneumatic system maintenance. Covers the skills required to service modern pneumatic and air preparation systems. Includes a general discussion on the safe working practices required with fluid power systems. Corequisite: FPX 1013 or Consent. Lecture: 0.4 credit (6.0 contact hours).
Components: Lecture

FPX 1004(1) **Course ID: 006542**
Hydraulic System Components and Applications
Introduces the basic fundamentals of hydraulic component, system design, and operation. Covers higher level schematic layout and design as well as the specifics involved with the actual component selection. Provides an opportunity to design and build actual hydraulic circuits and then troubleshoot any faults that may be present in their design or construction. Includes a general discussion on the safe working practices required with fluid power systems. Corequisite: FPX 1014 or Consent. Lecture: 1 credit (15 contact hours).
Components: Lecture

FPX 1005(1) **Course ID: 006543**
Pneumatic Systems and Components
Introduces the basic fundamentals of pneumatic components and operation. Covers higher level schematic layout and design as well as the specifics involved with the actual component selection. Provides the opportunity to design and build actual pneumatic circuits and then troubleshoot any faults that may be present in their design or construction. Includes a general discussion on the safe working practices required with fluid power systems. Co-requisite: FPX 1015 or Consent. Lecture: 1 credit (15 contact hours).
Components: Lecture

FPX 1011(0.3) **Course ID: 005676**
Introduction to Fluid Power Lab
Introduces the basic concepts of fluid power and discusses the application of those concepts in the development of hydraulic and pneumatic systems. Includes a general discussion on the safe working practices required with fluid power systems. Corequisite: FPX 1001 or Consent. Lab: 0.3 credits (9 contact hours).
Components: Laboratory

FPX 1012(0.3) **Course ID: 005677**
Introduction to Hydraulic System Maintenance Lab
Introduces pneumatic system maintenance. Familiarizes students with hydraulic fluids, reservoirs, and filters. Covers the methodologies required when servicing a typical hydraulic system. Includes a general discussion on the safe working practices required with fluid power systems. Corequisite: FPX 1002 or Consent. Lab: .3 credit (9 contact hours).
Components: Laboratory

FPX 1013(0.3) **Course ID: 005678**
Introduction to Pneumatic System Maintenance Lab
Introduces pneumatic system maintenance. Covers the skills required to service modern pneumatic and air preparation systems. Includes a general discussion of the safe working practices required with fluid power systems. Corequisite: FPX 1003 or Consent. Lab: 0.3 credit (9 contact hours).
Components: Laboratory

FPX 1014(0.55) **Course ID: 006544**
Hydraulic System Components and Applications Lab
Introduces basic fundamentals of hydraulic component, system design, and operation. Covers higher level schematic layout and design as well as the specifics involved with the actual component selection. Provides an opportunity to design and build actual hydraulic circuits and then troubleshoot any faults that may be present in their design or construction. Includes a general discussion of the safe working practices required with fluid power systems. Corequisite: FPX 1004 or Consent. Lab: 0.55 credits (16.5 contact hours).
Components: Laboratory

FPX 1015(0.55) **Course ID: 006545**
Pneumatic Systems and Components Lab
Includes the application of basic fundamentals of pneumatic components and operation. Covers schematic layout and design as well as the specifics involved with the actual component selection. Provides the opportunity to design and build actual pneumatic circuits and then troubleshoot any faults that may be present in their design or construction. Includes a general discussion on the safe working practices required with fluid power systems. Lab component for FPX 1005. Co-requisite: FPX 1005 or Consent. Lab: 0.55 Contact Hours (16.5).
Components: Laboratory

FRE French Language and Literature

FRE 101(4) **Course ID: 000866**
Elementary French I
Introduces basic modes of communication in French. Stresses speaking, listening, reading and writing as target skills. Emphasizes everyday language and presents an overview of the cultures of various Francophone countries.
Components: Lecture
Attributes: Foreign Language, Cultural Studies

FRE 102(4) **Course ID: 000754**
Elementary French II
Continues the study of basic French through grammar, reading, and oral practice. Stresses speaking, listening, reading and writing as target skills. Emphasizes everyday language and exploring the cultures of various Francophone countries. Prerequisite: FRE 101.
Components: Lecture
Attributes: Foreign Language, Cultural Studies

FRE 201(3) **Course ID: 000874**
Intermediate French I
Focuses on developing listening, speaking, reading, and writing skills in French at the intermediate level with an emphasis on developing cultural competency. Prerequisite: FRE 102 or two years of high school French and placement test.
Components: Lecture
Attributes: Foreign Language, Cultural Studies

FRE 202(3) **Course ID: 000811**
Intermediate French II
Continues FRE 201 with a focus on developing listening, speaking, reading, and writing skills in French at the intermediate level with an emphasis on developing cultural competency. Prerequisite: FRE 201 or three years of high school French and placement test.
Components: Lecture
Attributes: Foreign Language, Cultural Studies

FRS Fire/Rescue Science

FRS 101(3) **Course ID: 001466**
Introduction to Fire Service
This course includes fire department organization, fire behavior, firefighter safety, personal protective equipment, portable fire extinguishers, fire hose, appliance and streams.
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

FRS 102(3) **Course ID: 001467**
Firefighters Basic Skills I
Includes ropes, ladders, aircraft rescue, forcible entry, first aid, bloodborne pathogens, emergency disaster planning, and CPR. Prerequisite: FRS 101 or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

FRS 103(3) **Course ID: 001468**
Firefighters Basic Skills II
Includes building construction, wildland fire behavior, fire control, and ventilation. Prerequisite: FRS 102 or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

FRS 104(3) **Course ID: 001469**
Firefighters Intermediate Skills I
Includes water supply, foam fire streams, fire alarms and communications, hazardous materials awareness, hazardous materials operations, sprinklers, and salvage and overhaul. Prerequisite: FRS 103 or Consent of Instructor. Lecture: 3 credits(45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

FRS 105(3) **Course ID: 001470**
Firefighters Intermediate Skills II
Includes fire department organization, fire behavior, personal protective equipment, fire hose, appliances and streams, ropes, forcible entry. Prerequisite: FRS 103 or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

FRS 201(3) **Course ID: 001471**
Firefighters Advanced Skills I
Includes firefighter safety, rescue, ventilation ladders, fire control, and emergency disaster planning. Prerequisite: FRS 103 or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

FRS 202(3) **Course ID: 001472**
Firefighters Advanced Skills II
Includes portable fire extinguishers, water supply, pump operations, foam fire streams, salvage, fire prevention, public education, and fire cause determination. Prerequisite: FRS 104 or Consent of Instructor. Lecture: 3 credit hours (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

FRS 203(3) **Course ID: 001473**
Firefighters Advanced Skills III
Includes pump operations II, drivers training, overhaul, fire alarms and communications, sprinklers, and practicum. Prerequisite: FRS 202 or Consent of Instructor. Lecture: 3 credits (90 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

FRS 204(3) **Course ID: 001474**
EMT First Responder
EMT First Responder includes first responder (EMS).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

FRS 205(5) **Course ID: 001475**
Fire Officer I
Includes incident safety officer, haz-mat tech., fire prevention, public education and fire cause determination II. Prerequisite: FRS 202 or Consent of Instructor. Lecture: 5 credits (75 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

FRS 206(8) **Course ID: 001476**
Fire Officer II
Includes EMT, managing company tactical operations, decision making, and instructional techniques for company officers. Prerequisite: FRS 203 or Consent of Instructor. Lecture: 8 credit hours (180 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

FRS 207(6) **Course ID: 001477**
Fire Officer III
Includes company officer, incident command system (ICS), leadership strategies for company success, and fire/arson detection. Prerequisite: FRS 203 or Consent of Instructor. Lecture: 6 credits (90 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

FRS 1011(0.7) **Course ID: 003890**
Fire Department Organization I
Includes an overview of fire department organization, the role of department members, the mission of the department, standard operating procedures, rules and regulations, components of management, introduction to the Incident Command System and the roles of other agencies. Lecture: 0.7 credits (10 contact hours).
Components: Lecture

FRS 1012(0.3) **Course ID: 003891**
Fire Behavior I
Explores the aspects of the behavior of fire in its various forms. Covers the classification of fuel, products of combustion, and safety issues related to life hazards. Explains the three physical states of matter in which fuels are commonly found. Lecture: 0.3 credits (4 contact hours)
Components: Lecture

FRS 1013(0.4) **Course ID: 003892**
Firefighter Safety
Introduces the concept of safety in all phases of fire department operations. Covers station safety in normal day to day fire department operations as well as emergency response. Lecture: 0.4 credits (6 contact hours).
Components: Lecture

FRS 1014(0.8) **Course ID: 003893**
Personal Protective Equipment I
Addresses the nomenclature, use, maintenance, and documentation relative to the personal protective equipment including protective clothing and self-contained breathing apparatus. Prerequisite: (FRS 1012 and FRS 1013) or consent of instructor.
Components: Laboratory, Lecture

FRS 1015(0.2) **Course ID: 003894**
Portable Fire Extinguishers I
Covers types, classification and use of fire extinguishers including the definitions utilized in rating each type and the selection of a given extinguisher in attacking a particular class of fire.
Components: Laboratory, Lecture

FRS 1016(0.6) **Course ID: 003895**
Fire Hose, Appliances and Streams I
Introduces the student to the types, uses and operations of fire hose, appliances and streams used in the fire service. Prerequisite: FRS 1014 or Consent of Instructor
Components: Laboratory, Lecture

FRS 1021(0.2) **Course ID: 003896**
Ropes I
Familiarizes the student with the use and maintenance of rope and the various ties useful to hoisting equipment, securing objects and rescue. Prerequisite: (FRS 101 or FRS 1014) or Consent of Instructor.
Components: Laboratory, Lecture

FRS 1022(0.6) **Course ID: 003897**
Ladders I
Covers basic information pertaining to the use of ladders in the fire service including ladder terminology, types of ladders and ladder carries and raises. Prerequisite: FRS 1021 or Consent of Instructor
Components: Laboratory, Lecture

FRS 1023(0.4) **Course ID: 003898**
Aircraft Rescue
Provides the basic information needed by firefighters to effectively perform the various tasks involved in aircraft fire fighting and rescue. The information is consistent with the recommendations in NFPA 1003 Standard for Professional Qualifications for Airport fire Fighters, 1987 Edition. Lecture: 0.4 credits (6 contact hours).
Components: Lecture

FRS 1024(0.4) **Course ID: 003899**
Rescue I
Addresses the procedures of search for location, removal of entrapped and/or injured persons under fire conditions, and identifies the equipment required by the National Fire Protection Association used to affect the procedures. Prerequisite: FRS 1022 or Consent of Instructor
Components: Laboratory, Lecture

FRS 1025(0.3) **Course ID: 003900**
First Aid
Addresses the knowledge and skills for administering first aid including the assessment and treatment of patients sustaining injury or sudden illness until a higher level of trained emergency care technician arrives.
Components: Laboratory, Lecture

FRS 1026(0.3) **Course ID: 003901**
Bloodborne Pathogens
Provides bloodborne pathogens education for emergency responders, health professionals, and others who are subject to exposure in the 1) transmission; 2) prevention and control; 3) treatment; 4) legal issues; and 5) attitudes and behavior regarding human infections, and covers requirements of OSHA 1910.1030. Lecture: 0.3 credits (4 contact hours).
Components: Lecture

FRS 1027(0.1) **Course ID: 003902**
Emergency Disaster Planning I
Introduces the concept of emergency management and the importance of an incident command system. Identifies the likelihood of fire department involvement as an all-hazard response agency. Lecture: 0.1 credits (2 contact hours).
Components: Lecture

FRS 1028(0.2) **Course ID: 003903**
Forcible Entry I
Identifies materials and construction features of doors, windows, walls, door and window locking devices. Teaches forced entry through at least three (3) different types each of doors, windows, and walls. Discusses maintenance of tools and equipment used for forced entry and safety factors. Prerequisite: (FRS 101 or FRS 1014) or Consent of Instructor
Components: Laboratory, Lecture

FRS 1029(0.5) **Course ID: 003904**
CPR
Provides the knowledge and skills for administering care for respiratory or cardiac arrest including airway, breathing, and circulation assessment and the procedures to eliminate blockage of the airway, provide breathing assistance, and cardiac compressions.
Components: Lecture

FRS 1031(0.7) **Course ID: 003905**
Building Construction
Improves the ability of students to assess building stability and resistance to fire. Teaches to protect the lives of firefighters and community residents, while improving operational effectiveness through more complete and accurate 'size-ups.' Upgrades the skills of our nation's fire service.
Components: Lecture

FRS 1032(0.5) **Course ID: 003956**
Introduction to Wildland Fire Behavior
Familiarizes firefighters with wildland fires. Includes familiarization with the fire triangle, how environmental factors influence wildland fires, and the ability to recognize situations that indicate problem or extreme wildland fire behavior. Lecture: 0.5 credits (8 contact hours).
Components: Lecture

FRS 1033(1.4) **Course ID: 003906**
Fire Control I
Teaches the student to control or extinguish stacks of Class A materials, combustible liquids, vehicle fires, exterior dumpster/trash bin, and Class A combustible materials within a structure. Prerequisite: (FRS 1011 and FRS 1016 and FRS 1028) or Consent of Instructor. Corequisite: FRS 1034 or Consent of Instructor
Components: Laboratory, Lecture

FRS 1034(0.4) **Course ID: 003907**
Ventilation I
Involves the study of the principles of ventilation, including the methods of removing heated air, smoke and gases from a structure. Includes a review of roof structures and their effects on ventilation procedures. Prerequisite: FRS 1022 or consent of Instructor Corequisite: FRS 1033 or consent of Instructor.
Components: Laboratory, Lecture

FRS 1041(0.4) **Course ID: 003941**
Water Supply I
Provides the firefighter with a general understanding of water systems. Broadens the base of understanding of a water supply system and how it works. Covers hydrant systems as well as static water sources for determining their value as a firefighter water supply source. Prerequisite: (FRS 1012 and FRS 1016) or Consent of Instructor
Components: Laboratory, Lecture

FRS 1042(0.2) Course ID: 003942
Foam Fire Streams I
Instructs the student in foam performance, extinguishing properties and types of foam used in the fire service today. Prerequisite: (FRS 1012 and FRS 2023) or Consent of Instructor
Components: Laboratory, Lecture

FRS 1043(0.3) Course ID: 003943
Salvage I
Reviews salvage methods and operating procedures that further reduce fire, water, and smoke damage during and after fires. Prerequisite: FRS 1033 or Consent of Instructor
Components: Lecture

FRS 1044(0.1) Course ID: 003944
Overhaul I
Provides the firefighter with a general understanding of the purpose and scope of overhaul, including recognition of hidden fires and methods used to separate, remove, and relocate charred materials. Prerequisite: (FRS 1028 and FRS 1034) or Consent of Instructor
Components: Lecture

FRS 1045(0.2) Course ID: 003945
Fire Alarms and Communications I
Covers basic information pertaining to fire alarms and communications including radio operations, alarm receiving equipment, and dispatching procedures. Lecture: 0.2 credits (3 contact hours).
Components: Lecture

FRS 1046(0.5) Course ID: 003946
Hazardous Materials Awareness
Introduces the student to the principles of recognizing hazardous materials presence, protecting themselves from hazardous materials and calling for training/personnel, and securing the area safety. Lecture: 0.5 credits (8 contact hours).
Components: Lecture

FRS 1047(1.1) Course ID: 003947
Hazardous Materials Operations
Involves training to meet Federal Occupational Safety and Health Administration (OSHA), local occupational health and safety regulations and, U.S. Environmental Protection (EPA) requirements. Prerequisite: (FRS 1014 and FRS 1046) or Consent of Instructor. Lecture: 1.1 credits (16 contact hours).
Components: Lecture

FRS 1048(0.2) Course ID: 003948
Sprinklers I
Gives the firefighter a basic understanding of how sprinkler systems are designed and how they operate. Prerequisite: FRS 1041 or Consent of Instructor. Lecture: 0.2 credits (3 contact hours).
Components: Lecture

FRS 1051(0.3) Course ID: 003908
Fire Department Organization II
Includes an overview of an advanced fire department member's role within the organization and the member's responsibilities relative to the transfer of command. Prerequisite: FRS 1011 or Consent of Instructor
Components: Lecture

FRS 1052(0.4) Course ID: 003909
Fire Behavior II
Describes the chemistry and behavior of fire. Looks at finely divided fuel, flash point, ignition temperatures and heat sources. Prerequisite: FRS 1012 or Consent of Instructor
Components: Lecture

FRS 1053(0.5) Course ID: 003910
Personal Protective Equipment II
Addresses the nomenclature, use, maintenance, and documentation relative to the personal protective equipment including protective clothing and self-contained breathing apparatus. Prerequisite: FRS 1014 or Consent of Instructor
Components: Laboratory, Lecture

FRS 1054(0.6) Course ID: 003911
Fire Hose, Appliances and Streams II
Covers the selection, maintenance and testing of fire hose, nozzles and appliances. Prerequisite: FRS 1033 or Consent of Instructor
Components: Laboratory, Lecture

FRS 1055(0.7) Course ID: 003912
Ropes II
Includes rope size, strength, type and length of rope to accomplish a firefighting or rescue task. Prerequisite: FRS 1021 or Consent of Instructor
Components: Laboratory, Lecture

FRS 1056(0.5) Course ID: 003913
Forcible Entry II
Identifies materials and construction features of doors, windows, walls, and door and window locking devices. Teaches forced entry through at least three different types of doors, windows, and walls. Discusses maintenance of tools and equipment used for forced entry and safety factors involved. Prerequisite: FRS 1028 or Consent of Instructor
Components: Laboratory, Lecture

FRS 2011(0.3) Course ID: 003914
Firefighter Safety II
Correlates federal, state, and local laws as they relate to firefighter health and safety. Discusses the firefighter's role in department safety and includes safety procedures for hand and power tools. Prerequisites: (FRS 1013 and FRS 1028 and FRS 1034) or Consent of Instructor
Components: Lecture

FRS 2012(0.7) Course ID: 003915
Ladders II
Covers information pertaining to the use of ladders in the fire service including construction materials, load capacities, and cleaning and inspection. Prerequisite: FRS 1022 or Consent of Instructor
Components: Laboratory, Lecture

FRS 2013(0.3) Course ID: 003916
Rescue II
Addresses the techniques and procedures to follow relative to specific rescues, the equipment required for each and their proper use and the extrication of trapped victims. Prerequisite: FRS 1024 or Consent of Instructor
Components: Laboratory, Lecture

FRS 2014(0.3) Course ID: 003917
Ventilation II
Includes an advanced level study in ventilating procedures. Reviews mechanical ventilation systems and their use in fire ground operations. Prerequisite: FRS 1034 or Consent of Instructor. Lecture: 0.3 credits (4 contact hours).
Components: Lecture

FRS 2015(0.6) Course ID: 003918
Fire Control II
Provides an advanced course to teach the student to control or extinguish live fires involving combustible liquids of at least 100 sq. ft. using foam, fire in an elevated location, hidden fires inside walls and crawl spaces, fire involving energized electrical components and fire involving a flammable gas cylinder. Prerequisite: FRS 1033 or Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

FRS 2016(0.8) Course ID: 003919
Emergency Disaster Planning II
Meets the needs of fire officers and crew leaders with responsibilities to manage the operations of one or more companies in structural firefighting operations. Includes preparation for response, decision-making, and tactical operations. Involves extensive use of simulation to apply concepts and develop skill. Prerequisite: FRS 1027 or Consent of Instructor. Lecture: 0.8 credits (13 contact hours).
Components: Lecture

FRS 2021(0.1) Course ID: 003920
Portable Fire Extinguishers II
Covers types, classification and use of fire extinguishers including the definitions utilized in rating each type and the selection of a given extinguisher in attacking a particular class of fire. Prerequisite: FRS 1015 or Consent of Instructor. Lecture: 0.1 credits (2 contact hours).
Components: Lecture

FRS 2022(0.8) Course ID: 003921
Water Supply II
Includes information pertaining to water supply including water distribution systems, hydrant operation and apparatus, equipment and appliances required to provide water for fire extinguishment. Prerequisite: FRS 1041 or Consent of Instructor .
Components: Laboratory, Lecture

FRS 2023(1.1) Course ID: 003922
Pump Operations I
Includes the minimum requirements of professional competence of fire service pump operators. Prerequisite: FRS 1041 or Consent of Instructor.
Components: Laboratory, Lecture

FRS 2024(0.1) Course ID: 003923
Foam Fire Streams II
Includes an advanced course designed to instruct the student in the proper use of foam, the equipment used to make foam, and the hydraulics used in creating foam. Prerequisite: FRS 2023 or Consent of Instructor. Lecture: 0.1 credits (1 contact hour).
Components: Lecture

FRS 2025(0.1) Course ID: 003924
Salvage II
Covers, at an advanced level, salvage methods and operating procedures that further reduce fire, water, and smoke damage during and after fires. Prerequisite: FRS 1043 or Consent of Instructor. lecture: 0.1 credits (1 contact hour).
Components: Lecture

FRS 2026(0.8) Course ID: 003957
Fire Prevention, Public Education and Fire Cause Determination I
Covers basic information pertaining to the causes of fire and their prevention, fire inspections, and public fire education. Prerequisite: FRS 1043 or Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

FRS 2031(0.5) Course ID: 003925
Pump Operations II
Includes the minimum requirements of professional competence of fire service pump operators. Prerequisite: FRS 2023 or Consent of Instructor. Lecture: 0.5 credits (8 contact hours).
Components: Lecture

FRS 2032(0.8) Course ID: 003926
Driver's Training
Includes the minimum requirements of professional competence required for service as a fire apparatus driver. Prerequisite: FRS 2011 and FRS 2013 and Valid Driver License.
Components: Laboratory, Lecture

FRS 2033(0.2) Course ID: 003927
Overhaul II
Includes information pertaining to overhaul including safety precautions, indicators of structural instability, the preservation of evidence and the procedures for restoration of the fire premises. Prerequisite: FRS 1044 or Consent of Instructor. Lecture: 0.2 credits (3 contact hours).
Components: Lecture

FRS 2034(0.3) Course ID: 003928
Fire Alarms and Communications II
Discusses the policies and procedures concerning ordering and transmitting of multiple alarms and supervisory alarm equipment. Prerequisite: FRS 1045 or Consent of Instructor. Lecture: 0.3 credits (5 contact hours).
Components: Lecture

FRS 2035(0.5) Course ID: 003929
Sprinklers II
Promotes increased knowledge of various types of sprinkler systems and the working of these systems. Prerequisite: FRS 1048 or Consent of Instructor. Lecture: 0.5 credits (7 contact hours).
Components: Lecture

FRS 2036(0.7) Course ID: 003930
Practicum
Provides supervised on-the-job work experience related to the student's educational objectives. Students participating in the practicum do not receive compensation. Prerequisite: FRS 101 and FRS 102 and FRS 103 and FRS 104
Components: Practicum

FRS 2041(3) Course ID: 003931
First Responder (EMS)
Covers selected aspects of trauma care as outlined by the national standard created by federal guidelines and considered to be the responsibilities services with emergency medical response missions, consisting of classroom and laboratory instructions. Involves typical anatomy and physiology; patient assessment, care for respiratory and cardiac emergencies; control of bleeding, application of dressing and bandages, treatment for traumatic shock; care for fractures, dislocation, sprains and strains; medical emergencies; emergency childbirth; burns and heat emergencies; environmental emergencies; principles of vehicle rescue; transportation of patient, and general operations of emergency medical services. Lecture: 3 credits (45 contact hours).
Components: Lecture

FRS 2051(0.5) Course ID: 003932
Fire Prevention, Public Education and Fire Cause Determination II
Relates to prefire planning, fire incident reports, building fire safety surveys, school exit drills, home safety programs, common fire hazards, fire cause determination, protection and detection systems and identification of structural deficiencies that could cause fires. Prerequisite: FRS 2026 or Consent of Instructor
Components: Lecture

FRS 2052(1.1) Course ID: 003958
Firefighter Survival & Rescue
This intensive training course was developed in response to the tragic deaths of many firefighters across the nation in the past several years. Many of those who perished did so because they could not get out of the fire building or area where they were working. We train our firefighters in confined space, hazardous materials, infectious disease control, and incident command but until now there was no training course that taught our firefighters how to save their own lives. The firefighter Survival and Rescue courses are designed to fill this void by reviewing conditions and situations which may pose a risk to firefighters and by teaching firefighters how to help themselves in emergency conditions. Prerequisite: FRS 1024 or Consent of Instructor. Lecture: 1.1 credits (16 contact hours).
Components: Lecture

FRS 2053(3.4) Course ID: 003933
Hazardous Materials Technician
Provides the required training for Federal Occupational Safety and Health Administration (OSHA), Kentucky Occupations Health and Safety regulation and U.S. Environmental Protection Agency (EPA) requirements. Covers responding to releases or potential releases of hazardous materials for the purpose controlling the release and using specialized chemical-protective clothing and specialized control equipment. Prerequisite: FRS 1047 or Consent of Instructor
Components: Laboratory, Lecture

FRS 2061(6) Course ID: 003934
Emergency Medical Technician (EMT)
Covers all knowledge aspects of trauma care as outlined by national standards, created by federal guidelines, considered to be the responsibilities of ambulance operations. Involves typical anatomy and physiology, patient assessment, care for respiratory and cardiac emergencies, control of bleeding, application of dressing and bandages; treatment for traumatic shock; care for fractures, dislocation, sprains and strains; medical emergencies; emergency childbirth; burns and heat emergencies; environmental emergencies; principles of vehicle rescue; transportation of patients and general operations of ambulance systems. Prerequisite: Consent of Instructor.
Components: Lecture

FRS 2062(1) Course ID: 003935
Managing Company Operations: Decision Making
Meets the needs of fire officers and crew leaders with responsibilities to manage the operations of one or more companies in structural firefighting operations. Includes preparation for response, decision making, and tactical operations. Includes, as the foundation of the course, an extensive unit of simulation to provide application of concepts and the development of skills. Provides an effective approach to command decision making and organization. Focuses on a review of the command sequence and an overview of incident command for structural firefighting. Prerequisite: Consent of Instructor. Lecture: 1 credit (15 hours).
Components: Lecture

FRS 2063(1) Course ID: 003936
Instructional Techniques for Company Officers
Designed for company officers and other fire or rescue service personnel with the responsibility for conducting periodic company level or small unit training. Introduces the participant to basic instructional concepts and techniques. Emphasizes teaching principles and techniques applicable to fire and rescue service training. Includes effective communication, teaching from lesson plans, methods of instruction with emphasis on skills training, and adult learning. Prerequisite: (FRS 101 and FRS 102 and FRS 103 and FRS 104 and FRS 105 and FRS 201 and FRS 202 and FRS 203) or Consent of Instructor.
Components: Laboratory, Lecture

FRS 2071(3.5) Course ID: 003937
Company Officer
Involves information and activities needed to meet the minimum standards of Fire Service Company Officers in practicing competencies relative to administrative and incident resolution consistent with National fire Protection Association Code 1021. Prerequisite: (FRS 101 and FRS 102 and FRS 103 and FRS 104 and FRS 105 and FRS 201 and FRS 202 and FRS 203) or Consent of Instructor. Lecture: 3.5 credits (52 contact hours).
Components: Lecture

FRS 2072(0.9) Course ID: 003938
Incident Command System (ICS)
Meets the needs of fire officers and managers with responsibilities to use, deploy, implement and/or function within a departmental Emergency Management Systems. Addresses the need for incident management systems, an overview of the structure and expandability of ICS, an understanding of the command skills needed by departmental officers to effectively use ICS, guidelines and scenario practice on how to apply ICS, and guidelines and resource information for setting up and implementing a departmental ICS. Lecture: 0.9 credits (14 contact hours).
Components: Lecture

FRS 2073(0.8) Course ID: 003939
Leadership I: Strategies for Company Success
Designed to meet the needs of the company officer. Provides the participant with basic skills and tools needed to perform effectively as a leader in the fire service environment. Addresses techniques and approaches to problem-solving, identifying and assessing the needs of the company officers subordinates, running meetings effectively in the fire service environment, and decision-making for the company officer. Prerequisite: (FRS 101 and FRS 102 and FRS 103 and FRS 104 and FRS 105 and FRS 201 and FRS 202 and FRS 203) or Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

FRS 2074(0.8) Course ID: 003940
Fire/Arson Detection (Arson I)
Designed for fire officers and firefighters to improve their skills in determining fire causes at the fire scene. Begins with the study of the motivation of the arsonist and progresses through to the prosecution of the crime of arson. Includes the goal of providing appropriate training to the firefighter and fire officer so as to make an impact in reducing arson throughout the nation. Prerequisite: (FRS 101 and FRS 102 and FRS 103 and FRS 104 and FRS 105 and FRS 201 and FRS 202 and FRS 203) or Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

FRT Fire/Rescue Training

FRT 93(0.1 - 6) Course ID: 005311
Selected Topics in Homeland Security
Examines special topics in Homeland Security offered in response to needs of citizens and emergency response personnel. Outlines and course competencies will be located in the Academic Dean's office. Lecture: 0.1 6.0 credits (1.5 - 90 contact hours).
Components: Lecture

FRT 95(0.2 - 6) Course ID: 004167
Special Topics in Industrial Fire Protection
This course includes subjects related to the provision of fire protection in the industrial setting, to include but not limited to: fire extinguisher operations, fire alarm systems, fire protection systems, incipient fire brigade operations, and structural fire brigade operations.
Components: Lecture
Attributes: Technical

FRT 96(0.2 - 6) Course ID: 004166
Special Topics in Hazardous Materials
This course includes subjects related to the response to hazardous materials incidents, to include but not limited to: hazardous materials awareness, hazardous materials operations, hazardous materials technician, and hazardous materials continuing education.
Components: Lecture
Attributes: Technical

FRT 97(0.2 - 6) Course ID: 004165
Special Topics in Emergency Medical Services
This course includes subjects related to the provision of emergency medical services, to include but not limited to: CPR, first aid, first responder medical, emergency medical technician (EMT), and EMS continuing education.
Components: Lecture
Attributes: Technical

FRT 98(0.2 - 6) Course ID: 004164
Special Topics in Rescue
This course includes subjects related to technical rescue services, to include but not limited to: vehicle rescue, confined space rescue, high angle rescue, water rescue, and farm rescue.
Components: Lecture
Attributes: Technical

FRT 99(0.2 - 6) Course ID: 004163
Special Topics in Firefighting
This course includes subjects related to fire department services, to include but not limited to: fire prevention, fire suppression, company officer leadership, communications, building construction, and cause and origin investigations.
Components: Lecture
Attributes: Technical

FSI Forensic Science

FSI 110(3) Course ID: 015771
Introduction to Forensic Science with Laboratory
Introduces students to the field of forensic and investigative sciences. Focuses on the application of the scientific method of modern science to physical evidence analysis, including trace evidence, DNA analysis, ballistics, drug analysis, fibers, fingerprints, hair, tool marks, ink and other common discovery techniques. Pre-requisite: scores above the KCTCS developmental placement level or successful completion of the prescribed developmental course(s) or consent of instructor. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Other

FYE Achieving Academic Success

FYE 100(1) **Course ID: 007399**
Strategies for College Success
Introduces students to strategies and information that promote success in the college environment including educational planning, campus resources, and academic success skills. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Other, Course Also Offered in Modules

FYE 105(3) **Course ID: 007213**
Achieving Academic Success
Introduces students to strategies that promote academic, personal, and professional success in the college environment. Fosters a sense of belonging, promotes engagement in the curricular and co-curricular life of the college, and provides opportunities for students to develop academic plans that align with career and life goals. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other, Course Also Offered in Modules

FYE 1001(0.4) **Course ID: 007400**
Introduction to the College Campus
Introduces students to campus resources to promote academic and personal success. Lecture: 0.4 credits (6 contact hours).
Components: Lecture

FYE 1002(0.3) **Course ID: 007401**
Self-Management Skills
Introduces students to strategies and resources to promote personal responsibility for self-management skills. Lecture: 0.3 credits (4.5 contact hours).
Components: Lecture

FYE 1003(0.3) **Course ID: 007402**
Academic and Career Choices
Introduces students to skills and resources to promote development of academic and career choices. Lecture: 0.3 credits (4.5 contact hours).
Components: Lecture

FYE 1051(1) **Course ID: 007403**
Orientation to College
Introduces students to college policies, departments, student organizations, and technology to promote academic and personal success. Lecture: 1.0 credit (15 contact hours).
Components: Laboratory

FYE 1052(1) **Course ID: 007404**
Education and Career Planning
Introduces students to skills and resources needed to achieve academic and career success. Lecture: 1.0 credit (15 contact hours)
Components: Lecture

FYE 1053(1) **Course ID: 007405**
Academic, Financial, and Personal Skills
Introduces students to skills and resources needed to develop responsibility for personal, classroom and academic success. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

GBS Global Studies

GBS 290(3) **Course ID: 005514**
Instructor Consent Required
Global Studies Capstone Course
Integrates knowledge and concepts from the Global Studies core courses, study abroad experience, guided research and independent reading through a culminating project such as a research report, portfolio, or exhibition and a formal presentation. Prerequisite: Consent of Instructor: Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

GEN General College Studies

GEN 91(3) **Course ID: 007368**
Foundations of Information Literacy
Introduces information literacy skills. Focuses on skills related to defining information needs, finding sources, using information to solve problems, organizing and presenting information, and evaluation. Pre-requisite: COMPASS Reading Score of 60+ OR English Score of 39+. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Remedial - Reading

GEN 100(1) **Course ID: 000871**
Introduction to College
Introduces new students to college and college life, support services provided by the college, techniques for academic success, and career exploration. Lecture: 1.0 credit hour (15 contact hours).
Components: Lecture
Attributes: Other, Course Also Offered in Modules

GEN 102(3) **Course ID: 000872**
Foundations of Learning
Presents strategies which promote academic and personal success in college, including utilizing campus resources, learning and memory, self-management, critical reading, critical thinking, classroom skills, and career exploration. Lecture: 3 credit hours (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

GEN 103(1) **Course ID: 005328**
Instructor Consent Required
Principles of Peer Mentoring
Focuses on the study of issues, topics, and strategies related to mentoring first-year students. Relevant student development theory is highlighted. Prepares peer mentors to assist in teaching a section of GEN 100. Prerequisite: Sophomore status and consent of instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Other

GEN 104(2) **Course ID: 005329**
Instructor Consent Required
Applied Principles of Peer Mentoring
Offers academic credit to peer mentors who assist teaching a section of GEN 100 with a faculty member. Prepares peer mentors for helping plan course content, meeting with first-year students, and assisting with other course-related responsibilities as determined by the GEN 100 faculty member. Pre-requisite: GEN 103 and consent of GEN 100 instructor and Sophomore status. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Other

GEN 120(3) **Course ID: 003864**
Service Learning
Engages students directly in structured, community-based activities to acquaint them with community opportunities, services, and needs. Integrates concepts from the classroom with community service allowing student to practice concepts while developing an appreciation of service. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Other

GEN 122(1) **Course ID: 003871**
The Exemplary Tutor
Trains college students to be effective tutors by introducing ethics and philosophy of tutor-tutee relationships and concepts of questioning, learning styles, problem solving, active listening, goal setting, and critical thinking. Can be taken 1 time for a total of 1 credit. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Other

GEN 123(1 - 3) **Course ID: 003872**
The Exemplary Reading Tutor
Provides credit for students wishing to tutor in reading or reading based courses as related to the reading expectations in the KDE Core Curriculum. Grants credit of 1 hour for 45 hours of tutoring, 2 credits for 90 hours of tutoring, and 3 hours for 120 hours of tutoring. May be repeated for a total of 6 credits. Pass/Fail. Prerequisite: GEN 122
Components: Laboratory, Lecture
Attributes: Other

GEN 125(3) **Course ID: 006590**
Applied Meta-Thinking
Develops critical thinking skills and literacy processes across disciplines utilizing communication and appropriate applications in making self-paced, self-directed decisions and judgments. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, Course Also Offered in Modules

GEN 130(3) **Course ID: 005055**
Introduction to Information Resources
Provides basic concepts of the information society including different types of libraries and electronic resources, such as the internet, online databases, and information management software. Focuses on the nature of information, computer technology, and ethical computing issues. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Other

GEN 131(1) **Course ID: 005524**
Basic Library Research and Resources
Introduces student to effective and efficient use of information resources through development of search statements/strategies, location and evaluation of information and information resources, and review and revision of search strategies as needed. Introduces students to the library catalog, print resources, databases, web resources and to the evaluation of information. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Other

GEN 140(3) **Course ID: 000179**
Instructor Consent Required
Development of Leadership
Presents concepts of leadership and group dynamics, especially focusing on each student's individual leadership philosophy, and providing opportunities for all students to develop leadership skills and potential. Prerequisite: Consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, Course Also Offered in Modules

GEN 150(1) **Course ID: 000589**
Basic Computer Skills
Provides an introduction to commonly-used computing functions, emphasizing information processing, hands-on experience, and software packages. (This course does not meet the KCTCS computer literacy requirement.).
Components: Laboratory, Lecture
Attributes: Computer Literacy, Other

GEN 175(3) **Course ID: 006594**
Career and Life Skills Development
Investigates the importance of appropriate social behavior and interaction in the workplace. Presents skills necessary for job search, self-management, and life and work transitions for adapting to changing demands and expectations. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other, Course Also Offered in Modules

GEN 225(3) **Course ID: 006601**
Lifelong Learning Applications
Develops and identifies overall life skills in complex systems as a whole to interact and communicate with others to produce successful outcomes. Pre-requisite: GE 175 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, Course Also Offered in Modules

GEN 240(3) **Course ID: 015506**
Leadership Applications
Connects the principles of transformational leadership with personal behavior by building a base of leadership theory for a practical philosophy. Engages students in directed projects and case studies to put theory into practice. Provides instruction directly related to integrity, planning, alignment, decision-making, fostering understanding, change-management, relationships, internal locus of control, trust, respect, image-projection, influence, and building a following. Pre-requisite: GEN 140 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

GEN 276(1) **Course ID: 004489**
Employment and Professional Skills
Presents the process of effective career planning and develops the skills necessary for obtaining and maintaining employment. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical

GEN 1021(1) **Course ID: 007078**
College Basics & Learning Styles
Presents an overview to campus and online resources, policies, and procedures including diversity. Presents strategies for identifying personal learning, self-management, and career exploration tools. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

GEN 1022(1) **Course ID: 007079**
Critical Reading and Thinking
Presents strategies and tools to promote critical reading and thinking. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

GEN 1023(1) **Course ID: 007080**
Classroom Skills and Test-taking
Presents strategies and tools to promote classroom and test-taking skills. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

GEN 1251(1) **Course ID: 006591**
Transmission Connections
Introduces various forms of communication. Provides skills for understanding verbal and nonverbal communication and reflection on experiences. Lecture: 1.0 credits (15 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

GEN 1252(1) **Course ID: 006592**
Learning Skills Application
Provides skills for thinking critically and creatively, connecting prior learning, using reciprocal relationships, and interpreting information. Lecture: 1.0 credits (15 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

GEN 1253(1) **Course ID: 006593**
Effective Decision Making
Provides skills to analyze and evaluate judgments, ethical considerations, and new and diverse perspectives and points of view. Lecture: 1.0 credits (15 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

GEN 1401(1) **Course ID: 015781**
Philosophy and Self-Awareness
Presents concepts of leadership and group dynamics, especially focusing on each student's individual leadership philosophy. Provides opportunities for all students to develop individual potential and skills related to servant leadership and ethics. Pre-requisite: Consent of instructor. Lecture: 1.0 credit (15 contact hours)
Components: Lecture

GEN 1402(1) **Course ID: 015782**
Exploration and Analysis
Presents concepts of leadership and group dynamics, especially focusing on each student's individual leadership philosophy. Provides opportunities for all students to develop individual potential and skills related to visioning, trust and team-building, goal-setting, and decision-making. Pre-requisite: GEN 1401. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

GEN 1403(1) **Course ID: 015783**
Summary and Reflection
Presents concepts of leadership and group dynamics, especially focusing on each student's individual leadership philosophy. Provides opportunities for all students to develop individual potential and skills related to conflict resolution, management of change, empowerment of others and time management. Includes leadership course summary and reflection. Pre-requisite: GEN 1402. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

GEN 1751(0.4) **Course ID: 006595**
Career Planning Using Technology
Explores career search and selection enhanced by the development of an electronic portfolio. Lecture: 0.4 credits (6.0 contact hours).
Components: Lecture

GEN 1752(0.4) **Course ID: 006596**
Exploring Employment Strategies
Explores elements of the pre-employment process. Lecture: 0.4 credits (6.0 contact hours).
Components: Lecture

GEN 1753(0.4) **Course ID: 006597**
Business Basics
Presents basic business, math, and communication skills for the workplace. Lecture: 0.4 credits (6.0 contact hours).
Components: Lecture

GEN 1754(0.4) **Course ID: 006598**
Customer Service
Presents basic approaches for effective customer service skills. Lecture: 0.4 credits (6.0 contact hours).
Components: Lecture

GEN 1755(1) **Course ID: 006599**
Workplace Transitions
Presents employment and life skills including social interaction through workplace diversity, problem solving, working in teams, business procedures, and performance processes. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

GEN 1756(0.4) **Course ID: 006600**
Workplace Skills
Explains the importance of lifelong learning, flexibility, adaptability, and positive employment behaviors. Lecture: 0.4 credits (6.0 contact hours).
Components: Lecture

GEN 2251(0.4) **Course ID: 006602**
Acquiring Digital Skills
Access, manage, integrate, evaluate, and create digital technology and information. Pre-requisite: GE 175 or Consent of Instructor. Lecture: 0.4 credits (6 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

GEN 2252(0.6) **Course ID: 006603**
Project / Time Management Basics
Identify project and time management strategies to set appropriate goals and timelines. Pre-requisite: GE 2251 or Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

GEN 2253(0.3) **Course ID: 006604**
Leadership Overview
Provides an overview of leadership responsibility and the ethical considerations that impact decisions. Pre-requisite: GE 2251 or Consent of Instructor. Lecture: 0.3 credits (4.5 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

GEN 2254(0.4) **Course ID: 006605**
Global Awareness
Provides skills for reasoning, open dialogue with diverse cultures, and complex systems. Pre-requisite: GE 2251 or Consent of Instructor. Lecture: 0.4 credits (6 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

GEN 2255(0.3) **Course ID: 006606**
Financial Literacy
Provides skills for managing financial resources and making appropriate economic choices. Pre-requisite: GE 2251 or Consent of Instructor. Lecture: 0.3 credits (4.5 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

GEN 2256(0.3) **Course ID: 006607**
Civic Engagement
Develops students' community service by enabling knowledge about civic engagement and government processes. Pre-requisite: GE 2251 or Consent of Instructor. Lecture: 0.3 credits (4.5 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

GEN 2257(0.4) **Course ID: 006608**
Social Respect and Collaboration
Provides knowledge about cultural differences, value of diverse teams, and social respect. Pre-requisite: GE 2251 or Consent of Instructor. Lecture: 0.4 credits (6 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

GEN 2258(0.3) **Course ID: 006609**
Self-directed Learning
Identifies skills and strategies for being a self-learner through life and presents the importance of lifelong learning. Pre-requisite: GE 2251 or Consent of Instructor. Lecture: 0.3 credits (4.5 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

GEO Geography

GEO 130(3) **Course ID: 000351**
Earth's Physical Environment
A course exploring the fundamental characteristics of earth's physical environment. Emphasis is placed on identifying interrelationships between atmospheric processes involving energy, pressure, and moisture; weather and climate; and terrestrial processes of vegetative biomes, soils, and landscape formation and change. Fulfills elementary certification requirements in education, and USP cross-disciplinary requirement.
Components: Lecture
Attributes: SN - Science

GEO 152(3) **Course ID: 000398**
Regional Geography of the World
Introduces regional geography with a focus on the world's physical and human landscapes. Emphasizes connections between regions and how each region affects and is affected by global issues such as economic restructuring, food production, and environmental change. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

GEO 160(3) **Course ID: 000422**
Lands and Peoples of the Non-Western World
Provides a geographic study of world regions defined conceptually and historically as non-Western. Includes global patterns of social, cultural, economic and political differences between the West and Non-West and the processes key to making the Non-Western world, such as colonialism and imperialism. Considers significant current issues including sustainable development, environment, human rights, and gender relations.
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

GEO 162(3) **Course ID: 007194**
Introduction to Global Environmental Issues
This course addresses environmental questions of global importance, including population growth, resource consumption, environmental degradation, biodiversity conservation, toxic contamination and environmental justice. (Fulfills Gen Ed Global Dynamics requirement at the University of Kentucky.) Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, University Course (University of Kentucky)

GEO 172(3) **Course ID: 000158**
Human Geography
Presents a study of the spatial distributions of significant elements of human occupancy of the earth's surface including basic concepts of diffusion, population, migration, settlement forms, land utilization, and impact of technology on human occupancy of the earth. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

GEO 210(3) **Course ID: 000610**
Pollution, Hazards, and Environmental Management
An introduction to environmental systems such as weather and climate, vegetation, land forms and soils, and how the quality of these systems is modified by human use. Resource issues discussed include: atmospheric pollution and global warming; groundwater, flooding, and flood plain management; volcanic activity and earthquakes; and biospheric processes associated with deforestation and lake eutrophication. Case studies based upon important environmental problems illustrate how human activity and environmental systems interrelate. Fulfills USP Cross-Disciplinary requirement.
Components: Lecture
Attributes: SB - Social Behavior Science

GEO 222(3) **Course ID: 000482**
Cities of the World
Focuses on the historical development, contemporary character, and alternative futures of cities in both developing and developed regions. Emphasizes the spatial, social, economic, and political processes of major world cities. Includes a specific focus on contemporary urban problems.
Components: Lecture
Attributes: SB - Social Behavior Science

GEO 240(3) **Course ID: 000434**
Geography and Gender
Presents a geographic approach to the study of gender relations, emphasizing the role of space and place in shaping the diversity of gender relations throughout the world. Stresses the importance of gender relations in understanding a variety of issues through the application of case study analysis. Includes the design and use of urban and rural environments, "Third World" development, regional economic restructuring, changing political geographies, and migration.
Components: Lecture
Attributes: SB - Social Behavior Science

GEO 251(3) **Course ID: 000659**
Weather and Climate
A survey of the atmospheric controls associated with local, regional, and global weather and climate variability. Includes fundamental coverage of the physics and chemistry of energy, gases, pressure and moisture, with a goal of promoting understanding of general weather analysis and forecasting, severe storms, atmospheric pollution, descriptive climatology, and global climate change. Prerequisite: GEO 130 or consent of instructor.
Components: Lecture
Attributes: SN - Science

GER Germanic Languages and Literature

GER 101(4) **Course ID: 000884**
Elementary German I
Includes fundamentals of German with development of the four basic skills: reading, writing, listening, and speaking.
Components: Lecture
Attributes: Foreign Language, Cultural Studies

GER 102(4) **Course ID: 000759**
Elementary German II
Continues the fundamentals of GER 101 with further development of the four basic skills: reading, writing, listening, and speaking. Prerequisite: GER 101 or Consent of Instructor.
Components: Lecture
Attributes: Foreign Language, Cultural Studies

GER 201(3) **Course ID: 000880**
Intermediate German I
Includes the systematic review of grammar and furthering of reading, writing, listening, and speaking skills based upon cultural and literary materials. Prerequisite: GER 102, or equivalent or placement test.
Components: Lecture
Attributes: Foreign Language, Cultural Studies

GER 202(3) **Course ID: 000820**
Intermediate German II
Continues the study of intermediate German through grammar, reading, and oral practice. Prerequisite: GER 201 or equivalent or placement test.
Components: Lecture
Attributes: Foreign Language, Cultural Studies

GIS Geographic Information Systems

GIS 110(3) **Course ID: 004761**
Spatial Data Analysis and Remote Sensing Techniques
Introduces spatial analysis, the interpretation of map data, and the use of handheld Global Positioning Systems to collect data. Intended for those interested in a career in civil engineering or surveying. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (15 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

GIS 120(3) **Course ID: 004762**
Introduction to Geographic Information Systems
Presents a comprehensive survey of the fundamental concepts of GIS, providing students a command over the software to import raster and vector data into a GIS and to conduct simple analyses over their data. Intended for those with limited experience with GIS who are exploring career opportunities in the field. Prerequisite: GIS 110. Lecture: 3 credits (45 contact hours).
Components: Lecture

GIS 145(3) **Course ID: 016881**
Remote Sensing
Introduces remote sensing of the earth with topics that include the physical principles of remote sensing, history and future trends, sensors and their characteristics, image data sources, and image classification and analysis techniques. Pre-requisite or Co-requisite: CIT 125 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

GIS 210(3) **Course ID: 005042**
Advanced Topics in GIS
Explores advanced topics in GIS. Teaches students how to create and import geodatabases into a GIS, edit and create new vector and raster data, build layouts for presentation purposes and manipulate tabular data. Exposes students to various extensions within the software in order to conduct advanced analyses on their data. Prerequisite: GIS 120. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

GIS 255(3) **Course ID: 016882**
Geospatial Programming
Examines customization of GIS software applications by way of modified service interface elements while covering topics in theory and implementation of the various scripting languages currently used. Prepares students to solve geospatial problems and streamline GIS workflows through the creation and modification of scripts. Pre-requisite: CIT 125 or consent of instructor. Lecture: 3.0 credits (45 contact hours)
Components: Lecture
Attributes: Technical

GIS 260(3) **Course ID: 016883**
Geospatial Web Mapping
Introduces the design, publishing, optimization and maintenance of geospatial servers, and basic geospatial web services and applications. Includes an introduction to browser and mobile enabled interactive applications. Pre-requisite: CIT 125 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

GLY Geological Sciences

GLY 101(3) **Course ID: 000878**
Physical Geology
Introduces the principles of physical geology, including study of minerals and rocks, volcanoes and earthquakes, plate tectonics, and the landforms of Earth's surface. Requires concurrent enrollment in GLY 111.
Components: Lecture
Attributes: SN - Science

GLY 102(3) **Course ID: 000757**
Historical Geology
Covers the history of the Earth: its origin as part of the solar system, and subsequent evolution of the atmosphere, continents, seas, and life as interpreted from the rock record. Includes in addition to lecture illustrations, field trips and out-of-class exercises. Gives attention to the development of the basic principles used in interpretation. Prerequisite: GLY 101 and GLY 111 or consent of the instructor. Corequisite: GLY 112
Components: Lecture
Attributes: SN - Science

GLY 110(3) **Course ID: 002218**
Environmental Geology
Introduces and applies basic geological concepts to current environmental issues including the availability and use of water and soil resources, pollution causes, effects and solutions, and causes and prediction of environmental hazards including floods, landslides, subsidence, earthquakes and volcanoes. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

GLY 111(1) **Course ID: 000544**
Physical Geology Laboratory
Identify minerals and rocks in hand specimens, interpret landscape features as shown on topographic maps, and study geologic maps. Co-requisite: GLY 101. Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory

GLY 112(1) **Course ID: 000548**
Historical Geology Laboratory
Interpret geologic maps and cross-sections, and study important invertebrate fossil groups. Requires one field trip. Prerequisite: GLY 101 and GLY 111 or consent of the instructor. Corequisite: GLY 102. Lab: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory

GLY 114(1) **Course ID: 015662**
Environmental Geology Laboratory
Introduces and applies basic geologic concepts in a laboratory setting to current environmental issues, including the availability, use, and testing of water and soil resources, as well as the effects, solutions, and causes of pollution. Pre-requisite or Co-requisite: GLY 110. Lab: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory

GLY 130(3) **Course ID: 003781**
Dinosaurs and Disasters: A Brief History of the Vertebrates
Examines dinosaurs' interactions with their environment, their indirect influence on mammals, and implications for humankind. Traces the history of dinosaurs from early vertebrate ancestors to their final extinction, and surveys the evolutionary, paleogeographic, environmental, and possible extraterrestrial causes for their rise to dominance and sudden fall. Lecture: 3 hours.
Components: Lecture
Attributes: SN - Science

GLY 131(1) **Course ID: 007361**
Dinosaur Laboratory
Augments GLY 130 in analysis and interpretation of fossils, scale models, and sedimentary rocks. Investigates specimens and examines features of dinosaurs and related fossils. Uses sedimentary rocks and fossils to interpret ancient environments, dinosaur anatomy, and geologic history. Demonstrates to students how science works. Pre-requisite or Co-requisite: GLY 130. Lab: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory

GLY 140(3) **Course ID: 016864**
Introduction to Oceanography
Investigates geologic, physical, biogeochemical, and biologic processes that occur within the oceans of the world. Emphasizes connections between these processes and how those connections interact with our planet's life. Explores geologic evolution of the ocean floor, dynamic composition of ocean water, lithospheric and atmospheric interactions with the hydrosphere, marine life and ecosystems, and the impact of human activity on marine ecosystems. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

GLY 220(4) **Course ID: 000847**
Principles of Physical Geology
Learn how the Earth works: an integrated course in physical geology, covering the physical, chemical and biological processes that combine to produce geological processes. Focuses on plate tectonics, earth surface processes, and properties and formation of earth materials. Lab exercises emphasize identification and interpretation of geologic materials, geologic maps and cross sections. Lecture: 3 credits (45 contact hours); Laboratory: 1 credits (30 contact hours).
Components: Lecture
Attributes: SL - Science Laboratory, SN - Science

HCI Health Care Informatics

HCI 200(3) **Course ID: 007419**
Introduction to Health Care Informatics
Provides the foundation in the discipline of Health Care Informatics (HCI) by introducing basic concepts, historical development, current and future trends in the specialized discipline and the role of the informaticist in health care organizations. Clarifies the skills and knowledge required for successful integration of real-time documentation in health care informatics and management of that technology within the health care system. Pre-requisite: Minimum of an associate degree in a health care applied science or instructor consent. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

HCI 210(3) **Course ID: 007420**
Management of Health Care Information and System Security
Provides students with fundamental concepts in the discipline of health care informatics security systems that are required in the management of electronic data. Prepares the student to maintain data information system security within established standards of practice. Pre-requisite: HCI 200 Introduction to Health Care Informatics or Instructor Consent. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

HCI 220(3) **Course ID: 007421**
Database Systems In Health Care
Provides students with the concepts that are fundamental to the field of health care informatics database principles. Includes the development of data set management, the importance of accurate data input and mapping information extracted from the health care documentation system. Pre-requisite: HCI 200 Introduction to Health Care Informatics or instructor consent. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

HCI 230(3) **Course ID: 007422**
Legalities and Ethics in Health Care Informatics
Presents issues that the health care system faces in relation to legal issues, ethical dilemmas and regulatory and practice standards surrounding the real-time electronic health record and health care information systems. Pre-requisite: HCI 200 Introduction to Health Care Informatics or instructor consent. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

HCI 240(4) **Course ID: 007423**
Project Management In Health Care Informatics
Introduces project management in health care informatics. Includes the planning and analysis of documentation system needs, implementation, post go-live support of system and upgrades to the system, methodologies for planning and analyzing hardware and software, and support needs during the conversion phase. Includes an informatics project designed to facilitate the student gaining a higher level understanding of processes that are required for a positive project management outcome. Pre-requisite: HCI 200, HCI 210, HCI 220, and HCI 230. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Other

HEO Heavy Equipment Operation

HEO 106(7) **Course ID: 001522**
Motorgrader Operator
Examines a broad base of skills required to operate heavy equipment with an emphasis on safety. Operation of a Motor-Grader will be learned by students. Prerequisite: DIT 103. Lab: 7.0 credits (315 contact hours).
Components: Laboratory
Attributes: Technical

HEO 107(7) **Course ID: 015676**
Utility Tractor Loader Operator
Provides a broad base of skills required to operate heavy equipment with an emphasis on safety. Focuses on job awareness and industry requirements. Permits experience on dump truck and utility tractor loader. Pre-requisite or Co-requisite: DIT 103. Lab: 7.0 credits (210 contact hours).
Components: Laboratory
Attributes: Technical

HEO 110(7) **Course ID: 015677**
Power Shovel Backhoe Operator
Presents a background in the operation, maintenance, and safety considerations for a dump truck and power shovel backhoe. Pre-requisite or Co-requisite: DIT 103. Lab: 7.0 credits (210 contact hours).
Components: Laboratory
Attributes: Technical

HEO 111(7) **Course ID: 001524**
Bulldozer Operator
Presents a background in the operation, maintenance, and safety considerations for a dump truck and bulldozer. Prerequisite: DIT 103. Lab: 7.0 credits (210 contact hours).
Components: Laboratory
Attributes: Technical

HEO 115(7) **Course ID: 004571**
Hydraulic Excavator Operator
Covers a broad base of skills required to operate heavy equipment safely. Includes how to operate a hydraulic excavator safely. Prerequisite: HEO 151. Lecture: (45 contact hours). Lab: (180 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

HEO 125(3) **Course ID: 001525**
Special Problems I
Reinforces material presented in HEO 150, 200, and 250. Discusses job orientation, blueprint reading, and equipment operation. Pre-requisite Or Co-requisite: DIT 103. Lab: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

HEO 151(6) **Course ID: 015678**
Heavy Equipment Operating I
Instructs students in the operation of heavy equipment such as bulldozers, backhoes, front end loaders, graders, and scrapers. Explains techniques of operation such as digging, ditching, sloping, stripping, grading, backfilling, clearing fields, and foundation excavating. Pre-requisite or Co-requisite: DIT 103. Lecture: 6.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

HEO 201(6) **Course ID: 015679**
Heavy Equipment Operating II
Reinforces material first presented in HEO 151. Provides intermediate instruction for students in the operation of heavy equipment such as bulldozers, backhoes, front end loaders, graders, and scrapers. Explains intermediate techniques of operation such as digging, ditching, sloping, stripping, grading, backfilling, clearing fields, and foundation excavating. Pre-requisite or Co-requisite: DIT 103. Lecture: 6.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

HEO 225(3) **Course ID: 001528**
Special Problems II
Reinforces material presented in HEO 150, 200, and 250. Instructs all facets of project control. Pre-requisite Or Co-requisite: DIT 103. Lab: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

HEO 251(6) **Course ID: 015680**
Heavy Equipment Operating III
Reinforces material presented in HEO 151 and 201. Provides advanced instruction for students in the operation of heavy equipment such as bulldozers, backhoes, front end loaders, graders, and scrapers. Explains advanced techniques of operation such as digging, ditching, sloping, stripping, grading, backfilling, clearing fields, and foundation excavating. Pre-requisite or Co-requisite: DIT 103. Lecture: 6.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

HFL Healthcare Facility Management

HFL 100(3) Course ID: 015593
Introduction to Healthcare Facility Management
Introduces students to Healthcare Facility Leadership by presenting an overview of the history and development of healthcare engineering. The student will: learn the importance of compliance with the various codes and standards applicable to the healthcare facility environment; explore the driving factors affecting the operations and maintenance of health care facilities; review the complexity of delivering engineering in a patient centered environment; gain understanding of the complex structure and reporting relationships that exist in the healthcare industry; understand how the facility environment impacts regulatory requirements, clinical needs, and financial bottom line of healthcare; and gain an understanding of his/her role within the facility management department and the hospital setting. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HFL 110(2) Course ID: 015594
Introduction to Healthcare Industry
Introduces students to the healthcare industry by examining healthcare reporting relationships, organizational structures, personnel, facility types, department configurations, terminology, regulatory environment, and accreditation process. The course will also examine industry shifts related to an aging population and healthcare law changes. The student will have a clearer understanding of how to navigate the healthcare industry based on size and complexity. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

HFL 120(2) Course ID: 015663
Infection Control and Prevention
Examines the historical and evolving infection control complexities from both a clinical and physical environment perspective. Reviews changes the industry has taken to address this growing healthcare industry challenge. Studies how the physical environment and engineering practices during construction and maintenance impact infection control. Reviews infection control risk assessments and prevention documentation and techniques. Lecture 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

HFL 130(3) Course ID: 015664
Compliance, Codes and Standards I
Introduces student to the various codes & standards, regulatory, and accreditation agencies in Healthcare. Takes into consideration local, state, and federal regulatory bodies such as Occupational Safety and Health Administration (OSHA), National Fire Protection Association (NFPA),Building Owners and Managers Association (BOMA), Center for Medicare and Medicaid Services (CMS), American Society for Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE), International Organization for Standardization (ISO), National Electrical Code (NEC), International Building Code (IBC), The Joint Commission, and the DNV. Examines the facility leader's role in coordination and participation in the accreditation and regulatory survey processes. Evaluates the role of a coordinator and participant in emergency management drill and training. Develops fire training and drill coordination documentation. Pre-requisite: HFL 100 Introduction to Healthcare Facility Management. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HFL 140(3) Course ID: 015665
Maintenance and Operations I
Examines and reviews mechanical, electrical, plumbing, medical gas, fire protection, building envelope, medical, steam, and security systems that comprise most healthcare facilities. Reviews computer systems and software such as building automation, fire systems, work order systems, and CAD/BIM used by facility engineering. Understands equipment inventory, entry control, and disposition. Develops maintenance program for buildings, equipment, utilities, and grounds. Reviews energy management and benchmarking. Pre-requisite: HFL 100 Introduction to Healthcare Facility Management. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HFL 150(3) Course ID: 015666
Planning, Design and Construction I
Covers project management delivery from concept, development, design, contracting, method, bidding, budgeting, equipment acquisition, specifications, and meeting management. Develops and reviews current Infection Control Risk Assessment(ICRA) practices and documentation. Develops and reviews Interim Life Safety Measures (ILSM) practices and documentation. Pre-requisite: HFL 100 Introduction to Healthcare Facility Management. Lecture: 3.0 credits (45 contact hours)
Components: Lecture
Attributes: Technical

HFL 230(3) Course ID: 015667
Compliance, Codes and Standards II
Examines the major codes, standards and regulatory rules that apply to the healthcare industry. Examines. National Fire Protection Association (NFPA) 101, 110, 99, 25, 20, 10; Facility Guidelines Institute (FGI) Guidelines; The Joint Commission Standards for accreditation; and how to maintain standard specific documentation and checklists for accreditation surveys. Develops and maintains medical equipment and utility system programs. Develops and conducts environmental rounds and surveys. Develop standard specific policies and procedures, such as National Fire Protection Association (NFPA) 99 electrical equipment safety inspection requirements. Pre-requisite: HFL 130 Compliance, Codes and Standards I. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HFL 240(3) Course ID: 015668
Maintenance and Operations II
Examines the administration and coordination of work order processes to include preventive maintenance, corrective maintenance, moves, and projects. Applies equipment risk assessments in developing a maintenance program. Tests, monitors, and documents air quality, air exchange, and pressure relationships. Maintain control access and key control systems. Manages policies and procedures. Develops competency based training programs. Manages low voltage systems ((Nurse call, Closed Circuit Television System (CCTV), patient monitoring, Radio Frequency Identification (RFID) etc.)). Understands Performance Improvement (PI) processes. Pre-requisite: HFL 140 Maintenance and Operations I. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HFL 250(3) Course ID: 015669
Planning, Design and Construction II
Examines the management, planning, monitoring, reporting, and closing out of projects. Emphasizes the management of drawing revisions, commissioning, equipment documentation, and hand off training. Details Change Order Request (COR) and Request For Information (RFI), as well as, reviewing the needs and requirements for space planning and allocation. Pre-requisite: HFL 150 Planning, Design and Construction I. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HFL 260(3) Course ID: 015670
Healthcare Facilities Leadership Capstone I
Examines and applies Performance Improvement (PI) activities in healthcare engineering operations, maintenance, and project environment. Develops goals using S.M.A.R.T guidelines (Specific, Measureable, Assignable, Realistic, and Time bound). Develops and manages capital budgets, operating budgets recommendations. Generates financial, productivity and performance dashboards. Develops and implements equipment and systems training programs. Develops and monitors customized measures, indicators, and trends from computerized maintenance data. Co-requisite: HFL 140 Maintenance and Operations I. Lecture: 3.0 credits (45 contact hours)
Components: Lecture
Attributes: Technical

HFL 270(3) Course ID: 015671
Healthcare Facilities Leadership Capstone II
Examines management of related healthcare engineering roles, such as fire safety, environment of care, waste management, emergency management, protection services, and environmental services. Examines management of Human Resource functions (e.g. competencies, disciplinary action, hiring, performance appraisals, terminations, scheduling, staff orientation, and job descriptions). Performs and participates in organizational strategic planning, SWOT (strengths, weaknesses, opportunities and threats) analysis, report writing and presentations. Examines the importance of networking and partnerships (e.g. peers, local authorities, state authorities, and industry experts). Pre-requisite: HFL 260 Healthcare Facilities Leadership Capstone I. Co-requisite: HFL 240 Maintenance and Operations II. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HIM Historic Information Management

HIM 102(3) Course ID: 004303
Archives Studies: Characteristics & Overview
This course provides an introduction to the profession of archives studies. In addition to the history, development, and nature of work in the profession, the basics of collections management and development, intellectual control, preservation, conservation, and technological applications will be presented.
Components: Lecture
Attributes: Technical

HIM 104(3) Course ID: 004304
Museum Studies: Characteristics & Overview
This course provides an introduction to the profession of museum studies. Course topics include the history, development, and nature of work in the profession; the basics of collections management and development; intellectual control; exhibit design; preservation; and technological applications.
Components: Lecture
Attributes: Technical

HIM 106(3) Course ID: 004305
Records Management: Characteristics & Overview
This course provides an introduction to the profession of records management. In addition to the history, development, and nature of work in the profession, the course will present the basics of files and forms management, records inventory and analysis, scheduling and reprography, electronic records and record center operation.
Components: Lecture
Attributes: Technical

HIM 210(3) Course ID: 004306
Archives Studies: Appraisal & Accessioning
This course provides an in-depth examination of the information appraisal and accession process in archives work. Topics covered include intellectual content, documentation strategies, appraisal theories, and accessioning practices. Students are expected to complete an accession record, including records transmittal form, deed of gift, and accession form. Prerequisite: HIM 102.
Components: Lecture

HIM 214(3) Course ID: 004308
Archives Studies: Preservation & Conservation
This course provides an in-depth analysis of the conservation and preservation issues confronting archive staff. Included in this course are the impact of environmental conditions upon collections, problems associated with various records media and formats, conservation and working with conservators, security, and emergency mitigation and response procedures. Each student is expected to prepare an archives emergency response plan. Prerequisite: HIM 102.
Components: Lecture
Attributes: Technical

HIM 216(3) **Course ID: 004309**
Archives Studies: Automation & Electronic Records
This course is designed to provide students with an in-depth understanding of automation practices for archives. Topics covered in this course include database theory, design and development, as well as data field content and structure as they relate to archives automation. In addition to creating a complete archival catalog record, students will generate an automated accession report, collection description with appended image, and container list. Prerequisite: HIM 102.
Components: Lecture
Attributes: Technical

HIM 230(3) **Course ID: 004310**
Museum Studies: Collections Care & Management
This course provides an in-depth analysis of the curatorial needs of museum collections. Topics covered include collection policies and development, accessioning, registration, preservation, exhibiting and ethical consideration regarding deaccessioning and collection sales. Prerequisite: HIM 104.
Components: Lecture
Attributes: Technical

HIM 232(3) **Course ID: 004311**
Museum Studies: Conservation and Preservation
This course provides an in-depth analysis of the conservation and preservation issues confronting museum staff. Included in this course are the impact of environmental condition upon collections, problems associated with historic structures, artifact conservation and working with conservators, security, and emergency mitigation and response procedures. Each student is expected to prepare a museum emergency response plan. Prerequisite: HIM 104.
Components: Lecture
Attributes: Technical

HIM 234(3) **Course ID: 004312**
Museum Studies: Exhibits
This course provides an extensive analysis of the issues presented in the display of a museum's collections. Topics covered include exhibit planning, design, fabrication, installation, and interpretation. Ethical considerations and cultural sensitivity issues regarding the presentation of artifacts will also be addressed. Prerequisite: HIM 104.
Components: Lecture
Attributes: Technical

HIM 252(3) **Course ID: 004315**
Electronic Records Management
This course provides in-depth coverage of the process by which electronic records are created and managed. Topics covered in the course include identification and analysis of electronic records for scheduling, and the use of database systems for monitoring compliance with scheduling and disposition of electronic and paper-based records. Students will be expected to design, develop, and implement a database for tracking records schedule compliance. Prerequisite: HIM 106.
Components: Lecture
Attributes: Technical

HIM 254(3) **Course ID: 004316**
Records Reproduction & Imaging Systems
This course provides in-depth analysis of information reproduction systems for the management, preservation, and access of records. Students will master the appropriate use of a variety of image reproduction formats, quality control standards associated with each format, and the cost/benefit considerations appropriate for each image reproduction format. Prerequisite: HIM 106.
Components: Lecture
Attributes: Technical

HIS History

HIS 101(3) **Course ID: 004493**
World Civilization I
Presents a multicultural survey of world cultures and global issues from ancient to medieval times. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

HIS 102(3) **Course ID: 004675**
World Civilization II
Presents a multicultural survey of world cultures and contemporary global issues from 1600 to the present. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

HIS 104(3) **Course ID: 000860**
A History of Europe Through the Mid-Seventeenth Century
Surveys the development of European politics, society, and culture from the beginnings of civilization through the Age of Religious Conflict. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

HIS 105(3) **Course ID: 000834**
A History of Europe from the Mid-Seventeenth Century to the Present
Surveys the development of European politics, society, and culture from the Age of Absolutism to the present. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

HIS 106(3) **Course ID: 000532**
Western Culture: Science and Technology I
Surveys the interactions of science and technology with the social and cultural development of Western civilization to the Industrial Revolution. Emphasizes the values in scientific inquiry as compared with other kinds of inquiry and the importance of science and technology in modifying social organization and human expectations.
Components: Lecture
Attributes: AH - Arts and Humanities

HIS 107(3) **Course ID: 000535**
Western Culture: Science and Technology II
Surveys the interactions of science and technology with the social and cultural development of Western civilization since the Industrial Revolution. Emphasizes the values in scientific inquiry as compared with other kinds of inquiry and the importance of science and technology in modifying social organization and human expectations.
Components: Lecture
Attributes: AH - Arts and Humanities

HIS 108(3) **Course ID: 000542**
History of the United States Through 1865
Examines key political, economic, and social topics that have significantly influenced the American experience from the pre-colonial period through the Civil War era. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, Course Also Offered in Modules

HIS 109(3) **Course ID: 000171**
History of the United States Since 1865
Examine key political, economic, and social topics that have influenced significantly the American experience from Reconstruction through the contemporary era. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, Course Also Offered in Modules

HIS 120(3) **Course ID: 000348**
The World at War, 1939-45
Covers a global overview of the events of the Second World War, including consideration of the conflicts military, diplomatic, political, social, and economic dimensions.
Components: Lecture
Attributes: AH - Arts and Humanities

HIS 202(3) **Course ID: 000828**
History of British People to the Restoration
Surveys the major political, social, economic, and cultural developments in British history from the pre-Roman era through the Stuart Dynasty. Includes examination of such topics as the Norman conquest, the Plantagenet Dynasty, the Hundred Years War, War of the Roses, the Tudors Monarchs, the Protestant Reformation, the Stuart Kings, Puritan Revolution, and the Restoration.
Components: Lecture
Attributes: AH - Arts and Humanities

HIS 203(3) **Course ID: 000516**
History of the British People Since the Restoration
Covers the major political, social, economic, and cultural developments in British history from the Stuart period to the present. Includes examination of such topics as the Glorious Revolution, Imperial Wars, American Revolution, Napoleonic Wars, Industrial Revolution, Imperialism, World War I, Great Depression, World War II, Cold War, Decolonization, Post-War Britain, and the European Union.
Components: Lecture
Attributes: AH - Arts and Humanities

HIS 206(3) **Course ID: 002219**
History of Colonial Latin America
Surveys the social, economic, political and cultural development of Latin America from the fifteenth century to 1810 with an emphasis on pre-Columbian societies, the Iberian kingdoms in the Age of Expansion, the conquest and colonization of the indigenous cultures of the New World, the establishment of Spanish and Portuguese institutions, the relations between the Church and the State, the encomienda and the hacienda, slavery and the impact of the Bourbon Reforms on Latin America.
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

HIS 207(3) **Course ID: 002220**
History Modern Latin America, 1810 to Present
Covers the history of the Latin American nations focusing on their social, economic, political and cultural development. Emphasizes the history of the independence movements, nation building, the struggle for modernization, dependency and the phenomenon of revolution since 1810.
Components: Lecture
Attributes: AH - Arts and Humanities

HIS 215(3) **Course ID: 015616**
Historical Perspectives on Prisons and Police Work
Examines historical development of law codes, police work and prisons since the ancient world, with emphasis on the early modern period to the present. Develops an understanding of current practices in criminology, placing emphasis on the evolving conceptions of the causes of and cures for criminal behavior, and the professionalization of police and corrections personnel. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, Other

HIS 220(3) **Course ID: 007417**
Native American History: Pre-Contact to 1865
Surveys the struggle of Native Americans from pre-colonial times to 1865. Emphasizes the indigenous Native American culture and society, the Columbian and biological exchange, Indian-Anglo cultural interactions, the construction and reconstruction of Indian identities, U.S. Indian policy development, and forced Indian removal. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

HIS 221(3) **Course ID: 007418**
Native America History: 1865 to Present
Surveys the struggle of Native Americans from 1865 to the present times. Emphasizes the indigenous Native American culture and society, Indian-Anglo cultural interactions, the construction and reconstruction of Indian identities, and the struggles for the Great Plains and the Great Basin. Assesses the U.S. Indian policy development in relation to forced Indian removal, Americanization plan, educational assault on Indian children, termination policy, and sovereignty. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

HIS 240(3) **Course ID: 000439**
History of Kentucky
Surveys the chief periods in Kentucky's growth and development from 1750 to the present focusing on the social, economic, cultural, and political trends of each region.
Components: Lecture
Attributes: AH - Arts and Humanities

HIS 247(3) **Course ID: 000651**
History of Islam and Middle East Peoples, 500-1250 A.D.
Surveys the origins and development of the Islamic civilization from the time of the Prophet Muhammad to 1250, with special emphasis on the role of the Arab, Iranian, and Turkic peoples.
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

HIS 248(3) **Course ID: 000654**
History of Islam and Middle East Peoples, 1250 to the Present
Surveys the religion and institutions of the Islamic world in the Middle East with emphasis on the Mongol, Ottoman, Safavid, and Qajar Empires. Includes the demise of these empires, the response of the Middle East peoples to European imperialism, and the development of the Middle East since 1250.
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

HIS 254(3) **Course ID: 000670**
History of Sub-Saharan Africa
Surveys the major social, religious, cultural, economic, and political trends in Sub-Saharan African history since the 16th century. Includes the impact of the Atlantic slave trade, European imperialism, and 20th century wars on Sub-Saharan Africa.
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

HIS 260(3) **Course ID: 000680**
African American History to 1865
Studies the African American experience through the Civil War. Examines African heritage, slavery, and growth of African American institutions.
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

HIS 261(3) **Course ID: 000693**
African-American History 1865 - Present
Examines the African American experience from Reconstruction to the present, with emphases on the rise of segregation, the Civil Rights Movement, and race relations into the twenty-first century.
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

HIS 265(3) **Course ID: 000705**
History of Women in America
Surveys the history of American women, with particular emphasis on the mid-19th century to the present. Includes the major themes of family, work, social ideas about women, and feminism. Prerequisite: HIS 109 or consent of instructor.
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

HIS 266(3) **Course ID: 005481**
History of American Women to 1920
Emphasizes the fight for women's suffrage to 1920. Includes Amerindian women, immigrant women, the changing nature of the family and work, and societal ideas about women. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Other

HIS 267(3) **Course ID: 005482**
History of American Women from 1920
Emphasizes equal rights and the civil rights movements. Includes the rejection of feminism in the 1920s, and 1970s, the changing nature of the family and work, and societal ideas about women. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HIS 271(3) **Course ID: 005262**
Medieval Europe
Surveys European history from the fourth century through the fifteenth century. Lecture: 3 credits (45 contact hours). Prerequisite: Sophomore standing.
Components: Lecture
Attributes: AH - Arts and Humanities

HIS 295(3) **Course ID: 000749**
East Asia to 1800
Presents a survey of Chinese, Japanese, and Korean history from the earliest times to 1800. Emphasizes political, economic, social, and intellectual developments.
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

HIS 296(3) **Course ID: 000753**
History of Asia II
Surveys the major civilizations of Asia. Focuses on the key political, social and cultural developments of the major peoples from the beginnings of western influence in Asia to the present. Prerequisite: Sophomore standing or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

HIS 299(1 - 3) **Course ID: 005221**
Instructor Consent Required
Special Topics in History: (Topic)
Provides an in-depth study of a selected topic/area in History. Lecture: 1-3 credits (15-45 contact hours). Prerequisite: Sophomore standing or Consent of Instructor.
Components: Lecture
Attributes: Other

HIS 1011(1) **Course ID: 016360**
Early Civilizations
Presents a multicultural survey of world cultures and global issues from the birth of civilization to the Roman Republic. Lecture: 1 credit (15 contact hours).
Components: Lecture

HIS 1012(1) **Course ID: 016361**
Ancient Empires and Cultures
Presents a multicultural survey of world cultures and global issues from the Roman Republic to the rise of Islam. Pre-requisite: His 1011. Lecture: 1 credit (15 contact hours).
Components: Lecture

HIS 1013(1) **Course ID: 016362**
Rise of the Modern World
Presents a multicultural survey of world cultures and global issues from the rise of Islam through the Renaissance. Pre-requisite: HIS 1011 and HIS 1012. Lecture: 1 credit (15 contact hours)
Components: Lecture

HIS 1021(1) **Course ID: 016363**
The Modern World 1500-1750
Presents a multicultural survey of world cultures and global issues from 1500 to 1750. Lecture: 1 credit (15 contact hours).
Components: Lecture

HIS 1022(1) **Course ID: 016364**
Revolutions and Imperialism
Presents a multicultural survey of world cultures and global issues from 1750 to 1914. Pre-requisite: HIS 1021. Lecture: 1 credit (15 contact hours).
Components: Lecture

HIS 1023(1) **Course ID: 016365**
World Wars and Globalization
Presents a multicultural survey of world cultures and global issues from 1914 to the present. Pre-requisite: HIS 1021 and HIS 1022, Lecture: 1 credit (15 contact hours).
Components: Lecture

HIS 1081(0.75) **Course ID: 006235**
Colonial America
Examines key political, economic, and social topics from the pre-colonial period through settlement and colonization that have significantly influenced the American experience. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

HIS 1082(0.75) **Course ID: 006236**
The Early Nationalist Period
Examines key political, economic, and social topics from the Revolution through the early national period that have significantly influenced the American experience. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

HIS 1083(0.75) **Course ID: 006237**
Growth and Prosperity
Examines key political, economic, and social topics during the Antebellum period that have significantly influenced the American experience. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

HIS 1084(0.75) **Course ID: 006238**
Sectionalism and Civil War
Examines key political, economic, and social topics from sectional conflict through the Civil War that have significantly influenced the American experience. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

HIS 1091(0.75) **Course ID: 006239**
History of the United States through the Gilded Age
Examines key political, economic, and social topics from Reconstruction through the Gilded Age that have significantly influenced the American experience. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

HIS 1092(0.75) **Course ID: 006240**
History of the United States from Imperialism through World War I
Examines key political, economic, and social topics from the Progressive Era through World I and the 1920s that have significantly influenced the American experience. Prerequisite: HIS 1091. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

HIS 1093(0.75) **Course ID: 006241**
History of the United States from the Twenties to the Onset of the Cold War
Examines key political, economic, and social topics from the Depression and New Deal through World II that have significantly influenced the American experience. Prerequisite: His 1092. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

HIS 1094(0.75) **Course ID: 006242**
History of the United States during the Cold War to the Present
Examines key political, economic, and social topics from the Cold War and Civil Rights through the Rise of Conservatism that have significantly influenced the American experience. Prerequisite: HIS 1093. Lecture: 0.75 credits (11.25 contact hours).
Components: Lecture

HIT Health Information Technology

HIT 100(3) **Course ID: 004260**
Introduction to Health Information Technology
Includes history, organization, financing and delivery of health care services within a variety of settings. Explores the roles of a health information professional, an introduction to legal aspects of insurance billing and the role of the State Insurance Commission. Covers information on the generic components of the content, structure, collection, maintenance, and dissemination of health care data and how these components relate to record systems and documentation standards. Pre-requisite: Admission to the Health Information Technology Program or Medical Record Coding Specialist Certificate or Release of Information Data Specialist Certificate or by special permission of the Program Coordinator and Computer Literacy. Pre-requisite Or Co-requisite: [(BIO 135 or BIO 137) and (CLA 131 or AHS 115 or MIT 103)]. Minimum grade of C. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HIT 104(3) **Course ID: 004262**
Pathophysiology of Human Disease
An overview of pathophysiology content and teaching materials as they relate to the health information field. A review of disease terminology, pathology, clinical presentation, surgical and diagnostic procedures and treatment modalities. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Certificate Program or by special permission of the Program Coordinator and ((CLA 131 or AHS 115 or OST 103) and (BIO 137) with a grade of "C" or better). Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HIT 105(4) **Course ID: 007081**
Pathophysiology / Pharmacology for Health Information Professionals
Provides an overview of pathophysiology content, review of disease terminology, and clinical presentation with the application of pharmacology to treat human diseases as it relates to the field of health information technology. Pre-requisite or Co-requisite: [HIT 100 and (BIO 135 or BIO 137) and (CLA 131 or AHS 115 or MIT 103)]. Minimum grade of C. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

HIT 106(2) **Course ID: 004263**
Pharmacology for Health Information Professionals
Application of pharmacology to the treatment of human diseases and disorders as it relates to the field of health information technology. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Certificate Program or by special permission of the Program Coordinator and ((CLA 131 or AHS 115 or OST 103) and (BIO 137) with a grade of "C" or better). Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

HIT 109(4) **Course ID: 007083**
Clinical Classification Systems I
Applies current government-mandated diagnosis and procedure coding systems in a health care setting. Pre-requisite: HIT 105. Minimum grade C. Pre-requisite or Co-requisite: BIO 139 (If BIO 137 taken). Minimum grade C. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

HIT 110(2) **Course ID: 004265**
Legal & Ethical Issues in Health Information
Includes legal principles and issues that govern health information management and patient medical records. Covers ethical issues as they relate to the security and dissemination of patient health information and corporate compliance programs. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Specialist Certificate or Release of Information Data Specialist or by special permission of the Program Coordinator. Pre-requisite Or Co-requisite: HIT 100. Minimum grade of "C". Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

HIT 112(3) **Course ID: 004266**
Reimbursement Methodologies
Introduces the uses of coded data and health information reimbursement and payment systems appropriate to all health care settings including managed care. Includes a history of major U. S. insurance developments. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Certificate or by special permission of the Program Coordinator. [Computer/Digital Literacy and (BIO 135 or BIO 137) and HIT 100 and HIT 105]. Minimum grade of C. Pre-requisite Or Co-requisite: BIO 139 (if BIO 137 was taken). Minimum grade of C. Lecture 2.5 credits (37.5 contact hours). Lab: 0.5 credits (15 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

HIT 114(2) **Course ID: 004267**
Clinical Practicum I
Includes the clinical practice of medical records review and documentation within a health information department. Provides students with the opportunity to assist personnel in the legal and ethical collection and dissemination of health care data including the use of registries and indexes. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Certificate Program or by special permission of the Program Coordinator. Computer Literacy and [(BIO 139 and HIT 100 and HIT 104 and HIT 106) with a grade of "C" or better]. Practicum: 2.0 credits (90 contact hours).
Components: Practicum
Attributes: Technical

HIT 200(3) **Course ID: 004268**
Information Systems in Health Care
Covers the concepts of computer technology related to the healthcare industry and the tools and techniques for collecting, storing, retrieving, and analyzing health care data. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Specialist Certificate or by special permission of the Program Coordinator and (HIT 109 and HIT 110 and HIT 112). Minimum grade of "C". Pre-requisite Or Co-requisite: (CIT 130 or OST 240). Minimum grade of "C". Lecture: 2.5 credits (37.5 contact hours). Laboratory: 0.5 credits (15 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

HIT 202(3) **Course ID: 004269**
Clinical Classification Systems II
Includes Current Procedural Terminology (CPT) coding system and the study of hospital based reimbursement issues. Uses a microcomputer and software to apply medical coding procedures. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Specialist Certificate or by special permission of the Program Coordinator. (Computer/Digital Literacy and HIT 109). Minimum grade of C. Pre-requisite Or Co-requisite: (BIO 139 if BIO 137 was taken). Minimum grade of C. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

HIT 204(2) **Course ID: 004270**
Quality Assessment In Health Information
Principles of quality assessment as they relate to health information technology. Includes data collection and analysis, implementation of quality improvement processes, and a review of regulatory and accrediting organization requirements. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Certificate Program or by special permission of the Program Coordinator. Successful completion of ((HIT 108 and HIT 110 and HIT 112 and HIT 114) with a grade of "C" or better). Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

HIT 205(3) **Course ID: 007084**
Quality Mgmt & PI - Health Info
Examines principles of performance improvement as it relates to health information technology. Integrates data collection, analyses, evidence-based care, implementation of performance improvement processes, and examines regulatory, accrediting organization, and payor requirements including payment. Pre-requisite or Co-requisite: HIT 109 and HIT 110. Minimum grade of C. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HIT 206(2) **Course ID: 004271**
Clinical Classification Systems III
This course introduces the advanced application of clinical classification systems in the reimbursement for health care services. Included in the course will be a review of fraud, abuse and regulatory agencies. Students will use a microcomputer and software to apply medical coding procedures. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Certificate Program or by special permission of the Program Coordinator. Completion of HIT 202 with a grade of "C" or better. Lecture: 1.5 hours. Laboratory: 1 hour.
Components: Laboratory, Lecture
Attributes: Technical

HIT 207(3) **Course ID: 007085**
Clinical Classification Systems III
Introduces the advanced application of clinical classification systems in the reimbursement for health care services and specialty systems such as RBRVS, OASIS, RUGs, Cancer Registry, etc. Reviews fraud, abuse, and regulatory agency requirements relating to coding and billing. Pre-requisite: HIT109 and HIT 202. Minimum grade of "C". Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

HIT 208(1) **Course ID: 004272**
Clinical Coding Practicum
Introduces the student to the clinical practice of medical record coding procedures. Provides an opportunity to observe professional and ethical behavior standards within a health information department, code medical records for reimbursement, and practice appropriate security measures. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Certificate Program or by special permission of the Program Coordinator. Successful completion of HIT 108, HIT 110, HIT 112, HIT 202, HIT 206 with a grade of "C" or better. Practicum: 1.0 credits (90 contact hours).
Components: Practicum
Attributes: Technical

HIT 210(2) **Course ID: 004273**
Health Care Statistics
Use, collection, arrangement, presentation and verification of health care data. Fundamental concepts of descriptive statistics, data validity, reliability and the appropriate use and interpretation of applied healthcare statistics. Prerequisite: Admission to the Health Information Technology Program or Medical Record Coding Certificate Program or by special permission of the Program Coordinator. and (MT 110 or MT 150) and ((CIS 130 or OST 240) and (HIT 200 and HIT 202 and HIT 204) with a grade of "C" or better). Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

HIT 211(3) **Course ID: 007086**
Health Care Management and Statistics
Introduces the principles of organization, supervision, leadership, motivation, and team building within the health information environment. Applies concepts of descriptive statistics, data validity, reliability, and the appropriate use and interpretation of applied health care statistics including the use, collection, arrangement, analysis, presentation and verification of health care data. Pre-requisite: HIT 109 and HIT 110. Minimum grade of "C". Pre-requisite or Co-requisite: HIT 112. Minimum grade of "C". Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HIT 212(2) **Course ID: 004274**
Health Care Organization and Supervision
This course introduces the principles of organization, supervision, leadership, motivation, and team building within the health information environment. Included in the course will be a review of financial performance, ergonomics, contracts, marketing, education, and training. Prerequisite: Admission to the Health Information Technology Program or by special permission of the Program Coordinator. Successful completion of HIT 200, HIT 202, and HIT 204 with a grade of "C" or better. Lecture: 2 hours.
Components: Lecture
Attributes: Technical

HIT 214(3) **Course ID: 004275**
Clinical Practicum II
This course introduces the student to the clinical practice of medical records review, documentation, and supervision within a health information department. The student will observe and assist personnel in all areas of job responsibility within the Health Information Management department. Prerequisite: Admission to the Health Information Technology Program or by special permission of the Program Coordinator. Completion of HIT 200, HIT 202, and HIT 204 with a grade of "C" or better. Laboratory: 9 hours.
Components: Practicum
Attributes: Technical

HIT 215(4) **Course ID: 007087**
Clinical Practicum
Introduces the student to the clinical practice of health information review, documentation and supervision within a health information management (HIM) department. Observes and assists personnel in assigned areas of job responsibility within the HIM Department. Provides student with onsite project. Exposes student to HIM roles in other departments (e.g., quality, CDM, Cancer Registry, compliance, risk management). Pre-requisite: (HIT 200 and HIT 202 and HIT 204. Minimum grade of "C") or Consent of Program Coordinator. Practicum: 4.0 credits (180 contact hours).
Components: Practicum
Attributes: Course Also Offered in Modules, Technical

HIT 299(0.5 - 4) **Course ID: 007090**
Selected Topics in Health Information Technology: (Topic)
Addresses various health information technology topics, issues, and trends. Includes topics that may vary from semester to semester at the discretion of the instructors; course may be repeated with different topics to a maximum of four credit hours. Lecture: 0.5 - 4.0 credits (7.5 - 60.0 contact hours). Lab: 0.5 - 4.0 credit hours (15 -20 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

HIT 2151(2) **Course ID: 007088**
Clinical Practicum I
Continues the clinical practice of health information review, documentation and supervision within a health information management (HIM) department. Provides observation and assists personnel in assigned areas of job responsibility within the HIM Department. Pre-requisite: (HIT 200 and HIT 202 and HIT 204. Minimum grade of "C") or Consent of Program Coordinator. Practicum: 2.0 credits (90 contact hours).
Components: Practicum

HIT 2152(2) **Course ID: 007089**
Clinical Practicum II
Introduces the student to the clinical practice of health information review, documentation and supervision within a health information management (HIM) department. Provides observation and assists personnel in all assigned areas of job responsibility within the HIM Department. Pre-requisite: (HIT 200 and HIT 202 and HIT 204. Minimum grade of C) or Consent of Program Coordinator. Practicum: 2.0 credits (90 contact hours).
Components: Practicum

HMS Human Services

HMS 101(3) **Course ID: 000901**
Human Services Survey
Examines community human service agencies regarding their organization, service delivery system, staffing patterns, and funding sources. Explores the origin and development of the social welfare system as well as social welfare policy. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HMS 102(3) **Course ID: 000777**
Values of Human Services in a Contemporary Society
Examines the values and ethics of human service professions. Encourages a personal philosophy of client intervention, including the development of a professional value base, achieved through the examination of major social problems and issues. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HMS 103(3) **Course ID: 000202**
Theories and Techniques in Human Services
Introduces philosophies, theories for intervention, and the problem-solving process. Emphasizes the development of a skill base used in counseling techniques and client intervention. Enhances interpersonal relationship skills through knowledge of communication techniques. Provides activities in which the student will apply this knowledge and these skills. Prerequisite: (HMS101 and HMS 102 with a grade of "C" or better) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HMS 104(3) **Course ID: 000867**
Group Dynamics for Human Services
Covers group techniques in clinical or agency settings based on various theoretical models with emphasis on the leadership role, phases of group development, and interaction within the group. Prerequisite: HMS103 with a grade of "C" or better or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HMS 200(3) **Course ID: 000784**
Dynamics of Human Behavior
Includes an historic view of theories of personality development, maladaptive behavior, knowledge of treatment, techniques of adjustment and social implications. Prerequisite: PSY 110 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HMS 210(3) **Course ID: 000617**
Drugs, Society, & Human Behavior
Covers the nature and progression of chemical abuse and dependency, and effects on the individual, family, and society. Includes strategies for prevention, intervention, and treatment. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HMS 211(3) **Course ID: 005583**
Introduction to Addictions
Provides an overview of approaches to understanding addictions with emphasis on the bio-psycho-social model. Analyzes the etiology, progression, and processes involved in change. Prerequisite: PSY 110 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Course Equivalents: SWK 255
Attributes: Technical

HMS 212(3) **Course ID: 005585**
Crisis Intervention
Focuses on crisis intervention theory, suicide prevention, and risk assessment techniques. Covers risk assessment protocols, crisis triage, de-escalation and referral. Introduces clinical, ethical and legal aspects. Prerequisite: PSY 110 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Course Equivalents: SWK 260
Attributes: Technical

HMS 220(3) **Course ID: 005588**
Cultural Diversity in Human Services
Examines current and historical cultural diversity in human services provision. Focuses on cultural self-awareness and cultural competence as they pertain to human services professionals. Explores dominant and minority cultural norms, attitudes, and belief systems. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Course Equivalents: SWK 220
Attributes: Technical

HMS 235(3) **Course ID: 000818**
Teaching Persons with Mental Retardation
Introduces mental retardation with emphasis on understanding and teaching the mentally retarded. Prerequisite: PSY 110 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HMS 245(3) **Course ID: 016148**
Psychiatric Mental Health Technician
Prepares students for employment as psychiatric aides or psychiatric technicians. Includes a review of nursing assistant skills, psychopathology, DSM diagnostics, strengths perspective, bio-psycho-social assessments, and psychotropic medications. Explores the responsibilities of mental health technicians who work under the supervision of a psychiatrist, registered nurse, or social worker; as well as participate in the development and implementation of therapeutic treatment plans for persons with mental disorders; particularly those receiving treatment in an inpatient setting. Pre-requisite: NAA 100 or MNA100, PSY110 and HMS103 with a grade of "C" or better or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HMS 249(4) **Course ID: 016837**
Foundational Skills in Para-Professional Practice
Applies principles and skills previously learned in the Human Services courses to develop proficiency related to interviewing, data collection, assessment, goal development, contracting and documentation. Prepares students for work at the Bachelors in Social Work level. Pre-requisite: HMS 104. Lecture: 4.0 credits.
Components: Lecture
Attributes: Technical

HMS 250(4) **Course ID: 000808**
Clinical Practice in Human Services
Provides practice and application of principles and skills previously learned in Human Services courses in community agencies. Prerequisite: HMS104 with a grade of "C" or better or Consent of Instructor. Lecture: 1.0 credit (15 contact hour); Clinical: 3.0 credits (180 contact hours).
Components: Clinical, Lecture
Attributes: Technical

HMS 265(3) **Course ID: 000709**
Working with Disabilities in Human Services
Provides an in-depth study of the coordination and provision of services and supports for individuals with disabilities in community settings, including the provision of community-referenced instruction, vocational instruction in community settings, school-to-work transition planning, integrated recreation/leisure opportunities, and personal management/independent living skill training and supports. Emphasizes developmental disabilities and mental retardation. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HMS 299(1 - 3) **Course ID: 000522**
Special Topics in Human Services: (Topic)
Provides an in-depth knowledge of a Human Services topic and allows students' choices with coordinator/instructor's approval on an issue of instruction. Lecture: 1-3 credits (15-45 contact hours). Clinical: 1-3 credits (60-180 contact hours).
Components: Lecture
Attributes: Technical

HNR Honors

HNR 101(3) **Course ID: 004909**
Intro to Contemporary Thought
Introduces the development and impact of contemporary social, scientific, and philosophical thought from an interdisciplinary perspective. Gives attention to various historical and modern figures, relating their ideas and theories to our contemporary understanding of a variety of issues. Prerequisite: Admission in the Honors program. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

HON Honors

HON 101(3) **Course ID: 000892**
The Ancient World
From Greek and Roman antiquity to the early Christian centuries: an interdisciplinary course in intellectual history. Readings vary at the discretion of the faculty. Prerequisite: Membership in the Honors Program.
Components: Lecture
Attributes: AH - Arts and Humanities

HON 102(3) **Course ID: 000766**
The Medieval and Renaissance World
From the Middle Ages through the Reformation: an interdisciplinary course in intellectual history. Readings vary at the discretion of the faculty. Written assignments required. Prerequisite: Membership in the Honors Program.
Components: Lecture
Attributes: AH - Arts and Humanities

HON 201(3) **Course ID: 000889**
The Early and Modern World
From the development of the modern scientific method through mid-19th century industrialism: an interdisciplinary course in intellectual history. Readings vary at the discretion of the faculty. Prerequisite: Membership in the Honors Program.
Components: Lecture
Attributes: AH - Arts and Humanities

HON 202(3) **Course ID: 000832**
The Contemporary World
The contemporary world: an interdisciplinary course in intellectual history. Readings vary at the discretion of the faculty. Prerequisite: Membership in the Honors Program.
Components: Lecture
Attributes: AH - Arts and Humanities

HOS Hospitality Management

HOS 100(3) **Course ID: 002365**
Introduction to Hospitality Management
Introduces an overview of the hospitality industry. Examines the historical perspective and tracks current events. Examines the structure of the industry including chains, franchising, ownership, and management. Explores the inner workings of various components of lodging, foodservice and entertainment organizations. Demonstrates real-world application through industry examples and case studies which are used extensively. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HOS 160(3) **Course ID: 002366**
Security for the Hospitality Industry
Analyzes modern security concerns for the protections of assets unique to the hospitality industry, including loss prevention techniques and the application of law for lodging, retailing, clubs, restaurants, lounges and hospitality properties. Examines topics such as industrial safety, disaster control techniques, emergency action planning, and crisis communications. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HOS 200(3) **Course ID: 002367**
Cultural Heritage Tourism
Examines the range of cultural and heritage assets that can become viable tourism attractions and looks at ways of linking quality cultural heritage tourism to community development from effective planning and marketing. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HOS 210(3) **Course ID: 002368**
Front Office Operations
Identifies principles required to organize and operate hotel and motel front office guest needs, to have effective salesmanship, and to create procedures for different types of front office operations. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HOS 282(3) **Course ID: 002370**
Tourism Marketing
Examines how and why tourists make destination choices, and learns how to develop a strategic marketing system that emphasizes your destination's distinctive appeal. Answers questions of how to assess visitor markets, gather and analyze data, reduce risk and gain competitive advantages, and turn analysis into sound decisions. Applies knowledge from case studies, and practical tips for stretching marketing dollars through better monitoring, cost controls, and evaluation. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HPH Health Physics

HPH 100(3) **Course ID: 006324**
Health Physics Fundamentals
Introduces the fundamentals of atomic and nuclear physics, algebra, unit analysis, and team dynamics required within an organization that handles radioactive substances. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HPH 101(3) **Course ID: 000888**
Health Physics I
Introduces the principles of health physics to include atomic and nuclear physics, radioactivity, and ionizing radiation and its biological effects. Pre-requisite: (MAT 150 and PHY 152) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HPH 102(3) **Course ID: 000762**
Health Physics II
Introduces internal and external dosimetry, shielding, radiation detection, and environmental monitoring. Pre-requisite: HPH 101. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HPH 120(3) **Course ID: 000346**
Radiation Biology
Examines the cellular response, pathology, and short- and long-term effects of ionizing radiation on living tissue. Prerequisite: (BIO 112 and BIO 113) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

HPH 201(4) **Course ID: 000885**
Nuclear Instrumentation and Measurement I
Introduces the principles of operation and use of portable radiation survey instruments, counting room instrumentation including GM and proportional counters, and liquid scintillation. Introduces gamma ray spectroscopy. Pre-requisite: HPH 102. Lecture/Lab: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

HPH 202(4) **Course ID: 000824**
Nuclear Instrumentation and Measurement II
Introduces multi-channel analyzers in alpha, beta and gamma spectroscopy. Involves techniques to identify and quantify radioactive materials. Prerequisite: HPH 201. Lecture/Lab: 4.0 credit hours (90 contact hours).
Components: Lecture
Attributes: Technical

HPH 246(2) **Course ID: 000515**
Environmental Law
Surveys federal and state environmental legislation, the role of governmental agencies responsible for implementation of statutes, and simulations of regulation enforcement situations. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

HPT Historic Preservation Technology

HPT 100(3) **Course ID: 005299**
Introduction to Historic Preservation
Introduces historic preservation theory, history, and standards of practice through national and local case studies; related national and local agencies, organizations and legislation; and research of early American architecture. Co-requisite: HPT 101. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

HPT 101(2) **Course ID: 006963**
Introduction to Historic Preservation Lab
Provides an opportunity to practice historic preservation theory through on-site research, site surveys and recording techniques with an emphasis on assessing and planning rehabilitation and maintenance. Co-requisite: HPT 100. Lab: 2.0 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

HPT 120(2) **Course ID: 005297**
Traditional Woodworking
Presents traditional woodworking techniques, safe maintenance, and use of hand and power tools with hands-on training in fitting, fastening, and finishing a wood project. Lecture/Lab: 2.0 credits (52.5 contact hours).
Components: Lecture
Attributes: Technical

HPT 200(2) **Course ID: 006964**
Masonry Repointing and Repair
Introduces masonry materials and repair techniques for historic structures with an emphasis on brick and stone masonry and hands-on repair/repointing. Pre-requisite: ISX 100 or ISX 101 or Consent of Instructor. Lecture/Lab: 2.0 credits (52.5 contact hours).
Components: Lecture

HPT 202(2) **Course ID: 006965**
Window Restoration and Repair
Presents the process for the removal, repair, and reinstallation of windows in historic properties, including types and components, energy efficiency, safe work practices, basic tools, and glazing techniques. Pre-requisite: ISX 100 or ISX 101 or Consent of Instructor. Lecture/Lab: 2.0 credits (52.5 contact hours).
Components: Lecture
Attributes: Technical

HPT 204(2) **Course ID: 006966**
Roof Restoration and Repair
Covers pre-World War II roof designs and materials with a focus on repair and maintenance of roofs on historic buildings. Emphasizes fall protection systems and setup procedures for scaffolding and ladders. Pre-requisite: Consent of Instructor. Lecture/Lab: 2.0 credit hours (52.5 contact hours).
Components: Lecture
Attributes: Technical

HPT 298(2) **Course ID: 006967**
Field Experience Practicum
Provides an opportunity for the refinement of techniques and skills acquired in the previous historic preservation courses through non-compensated, supervised on-the-job experience or campus work assignments related to the student's educational and career training objectives. Pre-requisite: [(ISX 100 or ISX 101) and HPT 100 and HPT 101] or Consent of Instructor. Practicum: 2.0 credits (90 contact hours).
Components: Practicum
Attributes: Technical

HRS Honors

HRS 101(3) **Course ID: 000895**
Instructor Consent Required
An Integrated Survey of Western Civilization I
An honors course designed to provide an opportunity for the interested student to study the development of Western Civilization as reflected in the literary, artistic, musical, philosophical, political, and economic developments and movements of the major western cultures from ancient times through the Roman Empire. Lecture: 3 hours. Prerequisite: Consent of instructor.
Components: Lecture
Attributes: AH - Arts and Humanities

HRS 200(3) **Course ID: 000765**
Independent/Guided-Study Project
Students wishing to engage in an approved, valid research/study project may receive academic credit through this course. The project may be scheduled concurrently with the academic semester, or in the case of necessary travel, between semesters or during the summer term. Lecture: Variable; Laboratory: Variable. Prerequisite: Superior academic ability as demonstrated by tests, classwork, and interviews.
Components: Laboratory, Lecture
Attributes: Other

HRT Horticulture

HRT 102(3) **Course ID: 004340**
Introduction to Horticulture
This course introduces the practical approach to the study of horticulture. Students will learn the practices of horticulture and the purpose of plants for food, comfort, and bounty. Lecture: 3 hours.
Components: Lecture
Attributes: Technical

HRT 104(4) **Course ID: 001534**
Introduction to Herbaceous Plants
Covers the care, culture and distinguishing characteristics of herbaceous plants including the scientific and common names of many of the most common herbaceous plants including pests common to these plants. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: Technical

HRT 108(4) **Course ID: 001535**
Introduction to Woody Plants
Covers the care, culture, and distinguishing characteristics of woody plants including the scientific and common names of many of the most common landscape woody plants. Examines pests that are common to these plants. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: Technical

HRT 110(4) **Course ID: 001536**
Nursery Management
This course provides an introduction to the nursery industry. It includes information on soils, plant growth, nutrition and propagation methods; comparison of field and container growing practices; comparison of pest control methods; storing, grading and marketing nursery stock and the importance of keeping records and accounts.
Components: Lecture
Attributes: Technical

HRT 120(4) **Course ID: 001538**
Turf Management
Focuses on the identification, care, and culture of cool and warm season turf plants including how to calculate an area for seed or sod, identification of insects, weeds, diseases and the proper control measures for each, and the development of a schedule for good turf maintenance and renovation for turf areas. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: Technical

HRT 130(3) **Course ID: 001539**
Landscape Maintenance
Introduces basic techniques for landscape management including pruning and planting techniques, safe working practices in the landscape and pest management. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HRT 131(2) **Course ID: 001540**
Landscape Maintenance Lab
Applies knowledge of equipment, technology, and safety issues related to landscape maintenance, and the use of general math skills in computations used in the landscape including pesticides, fertilizers, and IPM systems used in maintaining the landscape, soils, and construction of various hard surface features. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

HRT 150(3) **Course ID: 001543**
Horticulture Business Management
This course introduces various career opportunities in a garden center and focuses on salesmanship and business practices utilized in this environment. Identification of characteristics, usage and care of woody ornamentals, annual and perennial plants, as well as use and care information needed by the consumer are included. Assisting customers in choosing chemical pesticides and plant related products is discussed.
Components: Lecture

HRT 160(4) **Course ID: 005263**
Retail Floral Design
Provides information and skills for successful employment in the floral design industry including business management, cost analysis and marketing, materials, containers, tools, and flowers. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: Technical

HRT 161(2) **Course ID: 005264**
Retail Floral Design Lab
Applies design principles and small business operations. Uses fresh and artificial floral products to create displays. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

HRT 210(4) **Course ID: 001545**
Landscape Design
Introduces the basic principles and practices of landscape design including the use of drawing equipment. Topics include the creation of design symbols and the development of a client needs and site analysis plan. Emphasis is placed on the ability to read landscape drawings and install plants from the design plan. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: Technical

HRT 240(4) **Course ID: 001547**
Greenhouse Management
Topics include the identification and function of a plant's leaves, roots and stems; as well as identifying major plant processes and sexual reproduction parts. The 16 essential elements and how they effect plant growth are discussed. Identification of diseases, insects and plant disorders in the greenhouse are included. Development of growing schedules for the following crops are completed: poinsettias, chrysanthemums, Easter lilies, bedding plants and hanging baskets. Injectors are calibrated using various fertilizer and chemical ratios. Prerequisite/Corequisite: HRT 140
Components: Lecture
Attributes: Technical

HRT 241(2) **Course ID: 001548**
Greenhouse Management Lab
This course is an introduction to the tools, equipment, procedures, supplies and safety issues related to greenhouse management. Other tasks are assigned as the season dictates. Prerequisite/Corequisite: HRT 240
Components: Laboratory
Attributes: Technical

HSE Health Sciences Education

HSE 101(1) **Course ID: 002221**
Introduction to Health Sciences
Provides students with information and career options about allied health and sciences programs including presentations by allied health practitioners. Students will research selected health profession/careers and allied health and sciences educational programs. Lecture: 1.0 credits (15 contact hours).
Components: Lecture
Attributes: Technical

HSM Homeland Security Emergency Management

HSM 100(3) **Course ID: 005518**
Introduction to Homeland Security
Introduces the history and organizational development of the US Department of Homeland Security. Examines the roles and functions of the components of Homeland Security and their relationships to state and local agencies. Investigates current trends and career opportunities in homeland security. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

HSM 110(3) **Course ID: 005519**
Introduction to Emergency Management
Introduces the field of emergency management and the incident command system, including the terminology and definitions used in emergency and disaster management. Examines four phases of emergency management and disaster planning: mitigation, response, recovery, and preparedness. Examines legal requirements, responsibilities, and laws pertaining to emergency management. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

HSM 225(3) **Course ID: 005780**
Ethical and Legal Issues in Homeland Security
Examines the ethical and legal issues in the administration of Homeland Security and its efforts to combat terrorism. Examines the legal powers and ethical standards entrusted in the personnel empowered with the implementation of the issues of Homeland Security. Provides an opportunity to demonstrate knowledge of the ethical and legal complexities and dilemmas involved in the establishment and enactment of policies pertaining to Homeland Security. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HSM 1003(1) **Course ID: 016173**
Homeland Security Trends
Examines with greater depth the roles and functions of the components of Homeland Security and their relationships to state and local agencies with an emphasis on investigating current trends and career opportunities in the field of homeland security. Pre-requisite: HSM 1002. Lecture: 1.0 credits (1.0 contact hours).
Components: Lecture

HST Health Care Foundations

HST 101(3) **Course ID: 007362**
Health Care Basic Skills I
Introduces student to basic health care skills such as measuring and recording vital signs, assisting licensed personnel, observing and reporting patient conditions, collecting specimens and caring for the hygiene, comfort, and safety of patients in various settings. Prepares the student for entry-level health care positions by incorporating certification for American Heart Association Cardiopulmonary Resuscitation (CPR). Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (45 contact hours).
Components: Laboratory, Lecture

HST 102(3) **Course ID: 007363**
Health Care Delivery & Management
Introduces delivery and management of health care including professionalism, health care roles, health care delivery models, and types of health care coverage. Explores legal/ethical issues including HIPAA and confidentiality, electronic medical records and patients' rights as well as analysis of current trends in health care today. (Appropriate for any student considering entering the Allied Health or Nursing field.) Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HST 103(2) **Course ID: 007364**
Health Care Communication
Introduces communication and its various forms as it exists in the health care field. Focuses on verbal, nonverbal, written and oral communication between members of the health team, patient, and caregivers through an interdisciplinary approach. Examines each role with discussion from the perspective of the involved parties. Emphasizes diversity, sociocultural influences, and teamwork. Includes discussion of the media's role in health care, as well as how health promotion campaigns may be implemented and managed. Appropriate for anyone interested in a career in allied health or nursing. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

HST 104(3.5) **Course ID: 015849**
Health Care Basic Skills I with Clinical
Introduces student to basic healthcare skills such as: measuring and recording vital signs, assisting licensed personnel, observing and reporting patient conditions, collecting specimens and caring for the hygiene, comfort, and safety of patients in various settings. Prepares the student for entry level healthcare positions by incorporating certification for American Heart Association Cardiopulmonary Resuscitation (CPR). Prepares student for the State Registered Nurse Aide examination. Note: Faculty and clinical sites must comply with applicable Federal and Kentucky laws and regulations including but not limited to 42 USC 1396r and 907 KAR 1:450. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (45 contact hours). Clinical: 0.5 credits (23 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Technical

HST 121(2) **Course ID: 007365**
Pharmacology
Introduces students to the basics of pharmacology/ pharmacokinetics, include terms used to describe various effects and reactions from drug usage. Will also introduce metric system and basic dosage calculations common to most fields of study within allied health and nursing. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

HST 122(3) **Course ID: 007366**
Clinical Pathophysiology
Explores an introduction to the nature of disease and its effect(s) on body systems. Provides a study of pathology and general health management of diseases and injuries across the lifespan. Includes topics of etiology, symptoms, physical and psychological reactions to diseases and injuries. Pre-requisite: BIO 137 or BIO 135. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HST 123(2) **Course ID: 007367**
Health Care Basic Skills II
Builds on basic health care skills by incorporating previous learning into more advanced concepts and higher level skills. Emphasizes care of patients with common health problems throughout the lifespan. Prepares students to independently perform skills such as blood sugar monitoring, running an electrocardiogram, urinary catheterization and enemas, collecting blood for lab tests and preparing patients and instruments for surgery, treatment or examination. Pre-requisite: HST 101. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

HUM Humanities

HUM 120(3) **Course ID: 000350**
Introduction to the Humanities
Introduces students to at least five disciplines in the humanities, such as art, literature, dance, drama, cinema, philosophy, music, architecture, religion, and mythology. Explores distinctions and relationships between the disciplines through study of their basic methods, themes, and forms. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

HUM 121(3) **Course ID: 004906**
Peace Studies
This interdisciplinary course is intended as a general introduction to the nature, scope, and methodology of Peace Studies, with a view toward the future. It will explore the history of non-violent movements to effect social change, the role of women in the attainment of peace and protection of life, the tie between social justice and the environment, and the resolution of conflict between individuals, groups, societies, and nations. The course includes the study of activists such as Dr. Martin Luther King, Jr., Gandhi, and Dorothy Day. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

HUM 135(3) **Course ID: 000582**
Introduction to Native American Literature
Introduces the study of the oral and written literature of Native American peoples, emphasizing the cultural and historical context in which it was composed. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, SB - Social Behavior Science

HUM 140(3) **Course ID: 006814**
Introduction to Latino Literature
Analyzes literary texts and other artistic expressions to reveal aspects of Latino cultures such as identity, immigration, indigeneity; relates literary developments and movements to the cultural, political, and religious experiences of Latinos in the U.S.; examines connections between minority writing and mainstream literary works. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

HUM 150(3) **Course ID: 005430**
Introduction to African Literature
Presents a cross-cultural and historical approach to the oral and written works by major Black writers of Africa. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

HUM 160(3) **Course ID: 007110**
Introduction to Holocaust Literature and Film
Analyzes literary texts, memoirs, film, and other artistic expressions of the Holocaust to focus on the cultural and political events that caused the Holocaust; examines how subsequent people represent what happened; explores the consequences of the Holocaust in terms of ethical and human rights issues; examines how issues of racism and religious intolerance occurred prior to and since the Holocaust; addresses the Holocaust in a comparative perspective to prior and subsequent acts of genocide in other countries. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

HUM 202(3) **Course ID: 000841**
Survey of Appalachian Studies I
Presents an inter-disciplinary introduction to Appalachian history, economy, geography, politics, and culture, primarily through exploration of texts about the region, including fiction, non-fiction, and poetry. Emphasizes geography, Appalachian identity, works, values, and communication. May also include exploration of regional music, traditional arts, drama, photography, film, and, where applicable, community-based explorations of the Appalachian experience. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, SB - Social Behavior Science

HUM 203(3) **Course ID: 000518**
Survey of Appalachian Studies II
Presents an inter-disciplinary introduction to Appalachian history, economy, geography, politics, and culture, primarily through exploration of texts about the region, including fiction, non-fiction, and poetry. Emphasizes migrations, economy, belief, expression, politics and government, and environment. May also include exploration of regional music, traditional arts, drama, photography, film, and, where applicable, community-based explorations of the Appalachian experience. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, SB - Social Behavior Science

HUM 204(3) **Course ID: 000812**
Appalachian Seminar
Examines in detail one or more issues pertinent to the Appalachian region. Topics may include but are not limited to: cultural diversity, religious expression, politics and government, trends in Appalachian literature, or trends in regional sociological scholarship. Topics may vary from semester to semester. This course may be repeated once for credit with a different topic. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, SB - Social Behavior Science

HUM 207(3) **Course ID: 007049**
American Seminar: Topic
Examines issues pertinent to American culture and identity through an interdisciplinary and multi-cultural approach. Includes topics such as cultural diversity, religious expression, politics and government, trends in art, literature, and/or music, political life, media representation, trends in social science which may vary from semester to semester. Course may be repeated once for additional credit when the repeat offering covers a different topic than the initial course offering. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

HUM 220(3) **Course ID: 005532**
Historical Perspectives on Peace and War
Provides an introduction to the history of violence and peace movements. Examines the anthropological, political, cultural and technological forces contributing to the frequent occurrence of war throughout history. Explores the history of movements and organizations, both religious and secular, intended to minimize warfare and oppression. Examines literature and visual arts to enhance and elaborate on the themes presented in the anthropological and historical sections of the course. Sophomore standing or consent of instructor. Prerequisite: Sophomore Status. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

HUM 221(3) **Course ID: 005533**
Contemporary Perspectives on Peace and War
Introduces the effects of modern-day warfare and the countervailing trends, actions, and movements to create peace. Focuses on aspects of peace and war such as the role of women, the perspectives of notable scientists, philosophical perspectives, the role of economic globalization in social justice, the environmental impacts, and conflict resolution. Sophomore standing or consent of instructor. Prerequisite: Sophomore Status. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

HUM 230(3) **Course ID: 000374**
Contemporary Japanese Literature and Culture in Translation
Presents traditional and contemporary aspects of Japanese culture as reflected in both cultural studies and literature. Examines daily life as revealed in the themes and motifs of Japanese fiction, poetry, drama, and film. Prerequisite: ENG 102 or ENG 105 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

HUM 245(3) **Course ID: 005357**
Seminar in Kentucky Literature
This is an online or computer-assisted seminar course in Kentucky literature recognizing, examining, and studying distinct regional differences and similarities with concentration on major contemporary and traditional Kentucky writers and their texts. Topics will vary, from a group of authors, and historical period or aesthetic movement, to a genre, a theme, or an aspect of literary theory. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: LIT 200
Attributes: AH - Arts and Humanities

HUM 250(3) **Course ID: 005923**
Appalachian Literature Survey
Surveys significant texts about Appalachia from native populations and early European settlement to the end of the twentieth century. Emphasizes texts by writers living and working in the region, though perspectives from outside of the region may be examined. Focuses on historical, social, political, and cultural contexts, as well as analysis of literary forms and techniques. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

HUM 251(3) **Course ID: 005924**
Contemporary Appalachian Literature
Examines significant texts by Appalachian writers of the last twenty-five years. Emphasizes the development of contemporary Appalachian literary voice and identity. Examines connections or challenges to "traditional" Appalachian heritage and cultural identity. Prerequisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

HUM 281(3) **Course ID: 006540**
Introduction to Film
Introduces the study of movies as a narrative art and a cultural document. Requires viewing of films outside of class. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: ENG 281
Attributes: AH - Arts and Humanities

HUM 282(3) **Course ID: 006541**
International Film Studies
Enhances student awareness of how cinema has been used as a multicultural tool for observing/analyzing various aspects of a broad range of societies. Includes critical analysis and interpretation of films from various cultures. Explores the films' countries of origin and the cinematic impacts upon the society and the world. Lecture: 3 credits(45 contact hours).
Components: Lecture
Course Equivalents: ENG 282
Attributes: Other

ICT Industrial Chemical Technology

ICT 186(3) **Course ID: 016366**
Intro to Process Technology
Introduces the student to a process technician's role and responsibility. Provides instruction in basic principles of safety, quality, process, science, and technology. Includes review of basic chemistry, physics, and math related to industrial process and solving for industrial problems. Introduces basic process equipment. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: Technical

ICT 192(4) **Course ID: 016367**
Process Technology Equipment
Covers process equipment's function, components, operation, and the Process Technician's role for operating and troubleshooting, to include, but not limited to piping, valves, tanks, pumps, compressors, electrical distribution, motors, heat exchangers, boilers, reactors, and auxiliary equipment. Pre-requisite: ICT 186 with a grade of "C" or greater or Permission of Instructor. Lecture/Lab: 4 credits (90 contact hours).
Components: Lecture
Attributes: Technical

ICT 194(4) **Course ID: 016368**
Process Technology Systems
Covers the interrelation of process equipment and process system, specifically the arrangement of process equipment into basic systems, process purpose, and specific function. Discusses the Process Technician's role in controlling factors that affect process systems under normal conditions and how to recognize abnormal process conditions. Pre-requisite: ICT 192 with a grade of "C" or greater or Permission of Instructor. Lecture/Lab: 4 credits (90 contact hours).
Components: Lecture
Attributes: Technical

ICT 196(3) **Course ID: 016369**
Process Technology Operations
Introduces the student to the field of operations within the process industry. Utilizes existing knowledge of equipment, systems, and instrumentation to understand the operation of an entire unit as related to commissioning, normal startup, normal operations, normal shutdowns, turnarounds, and abnormal situations. Pre-requisite: ICT 192 with a grade of "C" or greater or Permission of Instructor. Lecture/Lab: 3 credits (60 contact hours).
Components: Lecture
Attributes: Technical

ICT 200(4) **Course ID: 016370**
Process Troubleshooting
Instructs in troubleshooting techniques, procedures, and methods used to solve process problems. Pre-requisite: ICT 196 with a grade of "C" or greater or Permission of Instructor. Lecture/Lab: 4 credits (90 contact hours).
Components: Lecture
Attributes: Technical

ICT 230(3) **Course ID: 000377**
Health, Safety & Environmental Practices
Basic principles of industrial health and safety are discussed including accident and loss prevention, safety legislation, safety documents, safety management practices, health and safety hazards and control, safe work practices, and fire / explosion hazards. Corresponding field exercises will be performed as appropriate with participating industry representatives. Environmental regulations and their ultimate impact on a chemical facility as regulations will be discussed. An environmental audit will be performed in the field at participating local industries. Lecture: 3 hours. Corequisite: ICT 185, CHE 104 or 105, or consent of instructor.
Components: Lecture
Attributes: Technical

IDL Instructional Design and Learn

IDL 101(3) **Course ID: 007201**
Introduction to Instructional Design and Learning Technology
Provides an introduction to instructional design including the role of learning and training in an organization. This course introduces common types of learning including instructor-led training and eLearning. The course will also provide an overview of learning theory, common eLearning authoring tools, and careers in the design and creation of training. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IDL 110(3) **Course ID: 007202**
Instructional Design I
Provides an introduction to instructional systems design through an exploration of the ADDIE model. Students will design, develop, deliver, and evaluate training content for instructor-led learning. Pre-requisite: ENG 101 or consent of the instructor. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

IDL 113(3) **Course ID: 007245**
Introduction to Visual Communication for Learning
Introduces students to the elements of visual communication and storytelling for the purpose of learning and external promotion. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

IDL 120(3) **Course ID: 007203**
Facilitation Skills
Introduces students to the skills and technology vital to course facilitation. Students will apply adult learning concepts in the role of course facilitator for classroom and online settings. Pre-requisite: IDL 101 and IDL 110 or consent of the instructor. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

IDL 123(3) **Course ID: 007204**
Multimedia Design and Development
Introduces students to foundations of design and layout principles that enhance learning. Students will learn to use multimedia in an instructional context, including learning activities, and other forms of multimedia. This course also includes an overview of the course development process. Pre-requisite: IDL 101 and IDL 110 or consent of instructor. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

IDL 130(3) **Course ID: 007246**
Technical Writing for Instructional Design
Focuses on both the design and development of technical training and documentation. Students learn how performance outcomes, intended audience, types of content, and types of deliverables impact technical writing. Presentation strategies for content are covered. An overview of tools for technical writing is also provided. Pre-requisite: IDL 101 and IDL 110 or consent of the instructor. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

IDL 147(3) **Course ID: 007205**
eLearning Development I: Rapid Authoring Tools
Provides an overview of eLearning development tools for the development of courses including learning activities. Particular emphasis will be given to rapid authoring tools. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

IDL 203(3) **Course ID: 007247**
Designing in Client Applications
Focuses on designing with common client software applications such as word processing, presentation, and spreadsheets. Students will learn to apply visual communication principles to these tools for the purpose of creating training materials and templates. Pre-requisite: CIT 130 and IDL 113 or consent of the instructor. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

IDL 207(3) **Course ID: 007206**
eLearning Development II: HTML, CSS, and JavaScript
Covers HTML, CSS, and JavaScript for the development of web pages and web sites. Particular emphasis will be given to the use of these technologies for eLearning. Pre-requisite: IDL 147 or consent of the instructor. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

IDL 210(3) **Course ID: 007207**
Instructional Design II
Learn how Bloom's Taxonomy of Learning Domains translates into the planning, analysis, and design for the resolution of human performance problems. The ADDIE Model of instructional design will be explored within the context of eLearning. Pre-requisite: IDL 101 and IDL 110 or consent of the instructor. Lecture/lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

IDL 213(3) **Course ID: 007248**
Designing in Graphic Applications
Provides basic-level training for designing with common graphic software applications. Students will learn to apply visual communication principles in the context of a variety of deliverables, including print and eLearning. Pre-requisite: IDL 113 or consent of the instructor. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

IDL 217(3) **Course ID: 007208**
Multimedia Development
Introduces students to audio / video production and implementation for eLearning. Pre-requisite: IDL 123 or consent of the instructor. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

IDL 220(3) **Course ID: 007249**
Business Management for Instructional Design and Learning Technology
Provides an overview of business and the role of learning and training for an organization. This course includes an overview of financial and project management as well as the relationship of the training function to corporate goals and objectives. Pre-requisite: IDL 101 and IDL 110 or consent of the instructor. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

IDL 223(3) **Course ID: 007250**
Design Application
Provides practical application in which students will utilize their accumulated skills, knowledge of design software and fundamental principles in several real-life scenarios. Pre-requisite: IDL 203 and IDL 213 or consent of the instructor. Lecture: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

IDL 227(3) **Course ID: 007209**
eLearning Development III: Advanced Authoring Tools
Provides instruction in the development of eLearning courses and learning activities, including scenarios and assessments. Particular emphasis will be given to more advanced authoring tools and functions. Pre-requisite: IDL 207 or consent of the instructor. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

IDL 230(3) **Course ID: 007251**
Evaluation of Instruction
Provides an overview of the key considerations for evaluating instruction. Students will learn to write valid assessments of learning. Pre-requisite: IDL 210 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IDL 240(3) **Course ID: 007252**
Human Performance Consulting
Provides an overview of consulting for human performance issues. Students gain experience with problem solving, decision making, the application of learning skills, and the interpretation of information in a project context. Pre-requisite: IDL 210 or consent of the instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IDL 250(3) **Course ID: 007253**
Instructional Design III
Explored advanced topics in instructional design. Methods for increasing learner engagement for eLearning courses will be shared. The students will take on the role of the instructional designer to design and develop advanced learning activities, including scenarios, learning games, and simulations. Pre-requisite: IDL 210 or consent of the instructor. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

IDL 260(3) **Course ID: 007254**
Competency Models and Curriculum Design
Provides an overview of competency models, the definition of competencies through job task analysis and the development of curriculum models that support a competency-based training plan. Pre-requisite: IDL 210 or consent of the instructor. Lecture: 3.0 credit (45 contact hours).
Components: Lecture
Attributes: Technical

IDL 290(3) **Course ID: 007255**
Experiential Learning in Instructional Design
Perform entry-level Instructional Design and Learning technology skills based on student's chosen track. The learning plan will be discussed and agreed upon by the student, instructor and site supervisor. Pre-requisite: Permission of the instructor. Co-Op: 3.0 credits (180 contact hours).
Components: Co-Op
Attributes: Technical

IDL 299(3) **Course ID: 007256**
Instructor Consent Required
Instructional Design Capstone
Provides an opportunity to assemble a comprehensive portfolio using skills learned throughout the Instructional Design and Learning Technology Program, including an assessment of the student's overall skills related to their program specialization or track. Provides IDL students with a professional design portfolio to aid in the search for employment. Pre-requisite: Consent of the instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

IDT Interactive Digital Technology

IDT 100(3) **Course ID: 005738**
Fundamentals of Design
Introduces the basic drawing skills, elements and principles, color theory, terminology, and guidelines used to solve interactive design problems. Develops the ability and confidence to determine the appropriateness, feasibility and success of a potential design. Explores the integration of typography and visual elements using format structures. Prerequisite or corequisite: Computer literacy course. Lecture: 3 creidts (45 contact hours).
Components: Lecture
Attributes: Technical

IDT 110(4) **Course ID: 005739**
3D Modeling & Animation I
Applies basic design principles to the solution of visual problems using elements of 3D design. Includes 3D coordinate systems, 3D models, and mathematical computations as they apply to geometric construction. Emphasizes a creative and critical approach to working in the medium of 3D computer animation. Prerequisite or corequisite: Computer literacy course. Lecture/Lab: 4 credits (90 contact hours).
Components: Lecture
Attributes: Technical

IDT 120(4) **Course ID: 005740**
Digital Design Tools
Includes the basic skills, terminology, file formats and specifications of visual design within the digital realm through the use of industry standard vector and raster software. Requires file management and project planning. Prerequisite or corequisite: Computer literacy course. Lecture/Lab 4 credits. (90 contact hours).
Components: Lecture
Attributes: Technical

IDT 170(3) **Course ID: 005743**
Project Strategy
Introduces marketing and design terms, information gathering, research, and data interpretation. Uses small groups to teach the challenges and rewards of creative collaboration. Includes group work to plan, prioritize, and set goals for a team project. Prerequisite or corequisite: Computer literacy course. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IDT 210(3) **Course ID: 005744**
3D Modeling & Animation II
Covers advanced 3D modeling practices for artists and designers working with animation. Provides deeper knowledge of 3D modeling formats: Polygons, NURBS, and Subdivision Surfaces. Explores issues of integrating a model into animation production and application of advanced troubleshooting skills. Pre-requisite: IDT 110 with a grade of "C" or greater; or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IEC Interdisciplinary Early Childhood

IEC 101(3) **Course ID: 004130**
Orientation to Early Childhood Education
Introduces information related to designing appropriate environments and curricula for infants, toddlers, and preschoolers. Explores the historical and current influences on early childhood education. Includes 20 hours of required field experience, which may be waived by the IECE program coordinator for students concurrently enrolled in IEC 190 or IEC 291. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IEC 102(3) **Course ID: 004087**
Foundations of Early Childhood Education
Focuses on creating an environment and curricula that support cognitive, physical, creative, language, social, and emotional development of infants, toddlers, and preschoolers. Presents knowledge of appropriate child assessment, ethical decision-making in the early childhood profession, and accommodations for children with disabilities. Includes ten (10) hours of required field experience, which may be waived by the IECE program coordinator for students concurrently enrolled in IEC 190 or IEC 291. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IEC 120(3) **Course ID: 004131**
Health, Safety and Nutrition
Examines the components and skills necessary for maintaining a healthy and safe environment for young children. Lecture: 3 Credits (45 contact hours).
Components: Lecture
Attributes: Technical

IEC 130(3) **Course ID: 004132**
Early Childhood Development
Addresses the physical, language, cognitive, social and emotional development of children beginning with conception. Includes methods of observation that are practiced during field experiences. Includes 10 hours of required field experience, which may be waived by the IECE program coordinator for students concurrently enrolled in IEC 190 or IEC 291. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IEC 170(3) **Course ID: 005081**
Observation and Assessment
Presents the process of observation, documentation, and assessment. Includes assessment skills, identification of appropriate methods and instruments, and linking results to planning, guidance, and instruction. Emphasizes recommended practices, ethical and legal responsibilities for educators, and the role of the family in the process. Includes ten (10) hours of required field experience, which may be waived by the IECE program coordinator for students concurrently enrolled in IEC 190 or IEC 291 Pre-requisite: IEC 101 or IEC 102 or IEC 130 or permission of program coordinator. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IEC 180(3) **Course ID: 004088**
Approaches to Early Childhood Education Curriculum
Introduces theoretical perspectives for curriculum in early childhood programs. Teaches the design of curricula and examines the societal factors that impact programming for children. Includes 10 hours of required field experience, which may be waived by the IECE program coordinator for students concurrently enrolled in IEC 190 or IEC 291. Prerequisite: IEC 101 or IEC 102 or IEC 130 or permission of IECE program coordinator. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IEC 190(3) **Course ID: 004134**
Applied Experiences in Early Childhood Education
Includes participation in supervised teaching experiences in early childhood settings. Covers observing, planning, implementing and assessing learning experiences based on developmentally appropriate practices. Any 100 level IEC course or permission of program coordinator.
Components: Laboratory, Lecture
Attributes: Technical

IEC 200(3) **Course ID: 004133**
Child Guidance
Examines appropriate methods for guiding children and promoting the development of prosocial behaviors. Includes 10 hours of required field experience, which may be waived by the IECE program coordinator for students concurrently enrolled in IEC 190 or IEC 291. Prerequisite: IEC 101 or IEC 130 or permission of program coordinator. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IEC 210(3) **Course ID: 005580**
Families and Communities in Early Childhood Education
Examines community programs that focus on forming partnerships with families to support child development and family well-being. Builds an awareness of family in context of a diverse society to create respect, build reciprocal relationships, and empower families. Required: 10 hours of field experience. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IEC 216(3) **Course ID: 004135**
Literacy and Language in IECE
Presents the interaction of language therapy and instruction techniques and the resulting effect on language and literacy development. Includes five (5) hours of required field experience, which may be waived by the IECE program coordinator for students concurrently enrolled in IEC190 or IEC291. Pre-requisite: IEC 180 or Permission of program coordinator. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IEC 221(3) **Course ID: 004136**
Creative Expressions in IECE
Addresses the role of creativity as it relates to the development of young children. Studies a variety of art music, drama, and movement experiences that encourage creative expression in young children. Includes the implementation of appropriate creative activities in a child-centered environment. Includes five (5) hours of required field experience which may be waived by the IECE Program Coordinator for students concurrently enrolled in IEC 190 or IEC 291.Pre-requisite: IEC 180 or permission of program coordinator
Components: Lecture
Attributes: Technical

IEC 230(3) **Course ID: 004569**
Business Administration of ECE Programs
Introduces establishing, operating and/or owning an early childhood program. Includes legal forms for early childhood programs, finance, accounting, insurance, governmental regulations and assistance, economics, marketing and management principles.
Components: Lecture
Attributes: Technical

IEC 235(3) **Course ID: 004137**
Introduction to Inclusive Education
Presents the types of exceptionalities that occur in the development of children with an emphasis on state and federal laws that impact services. Introduces assessment, referral processes and sources, education plans, family service plans, center-based and home-based care, adaptations and assistive technology, and ethical considerations. Includes ten (10) hours of required field experience, which may be waived by the IECE program coordinator if the student is concurrently enrolled in IEC 190 or IEC 291. Pre-requisite: IEC 180 or permission of IECE program coordinator. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IEC 240(3) **Course ID: 004138**
Administration of Early Childhood Education
Focuses on the administrative responsibilities of creating and implementing education programs for children and their families with an emphasis on the administrative, organizational, and legal responsibilities in operating early childhood programs. Includes ten (10) hours of required field experience. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IEC 246(3) **Course ID: 004139**
Sciences and Math in IECE
Applies the concepts and principles of science, social studies, mathematics, and health in learning experiences for young children. Includes five (5) hours of required field experience which may be waived by the IECE program coordinator if the student I concurrently enrolled in IEC 190 or IEC 291. Pre-requisite: IEC 180 or permission of IECE program coordinator. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IEC 250(3) **Course ID: 004089**
School Age Child Care
Provides the student with specialized knowledge, skills, and abilities for working with school age children. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IEC 260(3) **Course ID: 004140**
Infant and Toddler Education and Programming
Examines the developmental and educational needs of children from birth to age three. Provides an opportunity for students to plan, prepare, and implement the care and educational environment for children birth to age three by integrating an understanding of the physical, social, emotional, and cognitive development with developmentally appropriate practices for each stage. Includes 10 hours of required field experience, which may be waived by the IECE program coordinator for students concurrently enrolled in IEC 190 or IEC 291. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IEC 291(3) **Course ID: 004141**
Instructor Consent Required
IECE Practicum/Cooperative Education
Requires participation in supervised teaching experiences in early childhood settings where practical skills are applied. Includes observing, planning, implementing and assessing learning experiences based on developmentally appropriate practices. Required: One Hundred and eighty (180) field hours of experience. Pre-requisite: Program Coordinator's Approval. Practicum: 3 credits (225 contact hours/ratio 75:1).
Components: Practicum
Attributes: Technical

IEC 299(1 - 3) **Course ID: 004142 Department Consent Required**
Special Topics in Early Childhood Education
An in-depth knowledge of a selected topic in early childhood education is the goal of this course. The topic of study may be the student's choice per instructor's approval or an issue or topic developed by an instructor for course presentation. Prerequisite: Coordinator's Approval. Lecture: 1-3 credits (15-45 contact hours).
Components: Lecture
Attributes: Technical

IES International Exchange Student

IES 235(1 - 3) **Course ID: 005198**
International Student Experience
First-hand exposure to cultures outside the United States. Includes travel and may include study, visits to corporate, government offices, cultural activities and/or work assignments. Prerequisite: IES 233. Practicum: 1-3 credits (60-180 contact hours).
Components: Practicum
Attributes: Technical

IET Integrated Engineering Technology

IET 102(2) **Course ID: 007134**
Preventive Maintenance
Introduces how routine work is done to keep equipment in good working order and to optimize its efficiency and accuracy. Addresses regular routine cleaning, lubricating, testing, checking for wear and tear and eventually replacing components to avoid breakdown. Introduces students to the various types and styles of predictive and preventive maintenance components, principles, and practices used in industrial applications. Lecture/Lab: 2.0 credits (40.5 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IET 104(2) **Course ID: 007137**
Blueprint Reading/Schematics
Introduces the fundamental information in drafting necessary to retrieve read, manipulate and understand a mechanical part print. Instructs students to recognize, identify, describe, and relate the components used in schematics, along with their symbols and connectors, to describe electrical, electronics, pneumatics, hydraulics, and piping circuits, as well as welding and joining symbols interpretation. Lecture/Lab: 2.0 credits (37.5 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IET 107(3) **Course ID: 007140**
Basic Electricity/Electronics
Introduces the various elements of basic electricity including the identification of electrical symbols as well as interpretation of schematics, cross referencing prints, tracing circuits, interpreting sequential function charts, line drawings and time charts. Introduces the student to electrical measurement instruments, including digital and analog multimeters, clamp-on ammeters, megohmeters, and the oscilloscope. Concentrates on control logic components and circuit function. Introduces the student to solid state devices and applications. Lecture/Lab: 3.0 credits (67.5 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IET 108(5) **Course ID: 007145**
Mechanical Drive Systems
Introduces safety, maintenance techniques and procedures used to maintain industrial equipment, including industrial couplings, chains, sprockets, belts, bearings, shafts, brakes, clutches, gears and cams. Addresses the principles of power transmission, calculations of speed and force and how they affect a power transmission system. Lecture/Lab: 5.0 credits (112..5 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IET 109(3) **Course ID: 007152**
Safety
Introduces OSHA and the OSHA regulations that apply to the auto manufacturing industry. Introduces safety rules and issues in the use of overhead cranes, hoists, rigging equipment, attachment components, calculating sling angle stresses, and safe lifting and turning loads. Provides the knowledge and skills necessary to help sustain life and minimize the consequences of injury or sudden illness to meet the various training needs of those in workplace, school or community settings. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IET 110(4) **Course ID: 007181**
Welding and Fabrication
Introduces the power sources used in shielded metal arc welding (SMAW) and gas metal arc welding (GMAW), along with equipment and filler metals used to produce a welded joint and welding principles along with the metallurgy of steel and welding. Covers shielded metal arc welding safety and shielded metal arc welding processes including flat, horizontal, vertical, and overhead welding techniques. Provides knowledge of theory, safety practices, equipment and techniques required for gas metal arc welding including different transfer methods and position welding. Introduces oxy-fuel welding and cutting, including safety, setup and maintenance of oxy-fuel welding and cutting equipment. Includes cutting, brazing, and welding techniques. Lecture/Lab: 4.0 credits (100.5 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IET 120(4) **Course ID: 007186**
Machine Tool Operations
Introduces machining operations, procedures and machines used by multi-skilled industrial maintenance technicians. Introduces the safe and correct operation of lathes, milling machines, drill presses, metal saws and hand and power tools. Requires students to work with various measuring and layout tools found in industrial environments. Lecture/Lab: 4.0 credits (102 credit hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IET 130(5) **Course ID: 016096**
Lean Manufacturing
Instructs the students in the basic concepts of a safety culture and hazard prediction training. Introduces the fundamental 5S process, the Toyota Production System for Maintenance, the Toyota Problem Solving method, the Toyota Drive and Dedication model, and the Toyota Maintenance Reliability Process and Reliability Centered Maintenance Analysis. Lecture: 5.0 credits (75 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IET 201(6) **Course ID: 007180**
Electrohydraulics/Pneumatics
Explains the fundamental concepts of fluid power and electro-fluid power systems. Covers the principles of fluid power, calculations of physical properties of fluids and their ability to do work. Introduces the various fluid power components, symbols, circuits. Introduces troubleshooting of fluid power components and systems with an emphasis on safety. Addresses fluids, filters, reservoirs, piping, pumps, actuators, accumulators, control valves, and combination circuits. Lecture/Lab: 6.0 credits (120 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IET 203(5) **Course ID: 007172**
Programmable Logic Controllers
Introduces Programmable Logic Controllers (PLC) and elements needed for an automated industrial control system. Introduces memory and project organization within a PLC and provides instruction in basic numbering systems, computer and PLC terminology. Introduces PLC control functions, program structures, language standards, wiring and troubleshooting methods, as well as, real world communications. Requires the student to program a PLC which may include a combination of ladder logic, structured text, sequential function chart and/or function block languages. Includes various protocols of industrial communications used between PLC controlled machines, PLC to PLC, PLC to computer, and computer to computer. Lecture/Lab: 5.0 credits (109.5 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IET 205(4) **Course ID: 007167**
Robot Maintenance
Introduces robotics in regard to industrial robotic safety standards, applications, types of classes for industrial robots, basic system components, robotic motion concepts, key programming techniques, definitions and the common terms associated with computer integrated manufacturing (CIM) as it relates to robotic cells. Instructs students on the mastering concepts of preventive maintenance techniques required for a robot and their backup systems in addition to recovery procedures needed to interpret robot error codes and perform a safe recovery start up procedure on robotics equipment, as well as integrating robotic applications in a PLC-controlled, automated system. Lecture/ Lab: 4.0 credits (82.5 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IET 206(5) **Course ID: 007161**
Controls and Instrumentation
Covers the diversity of control devices including: theory of operation, applications in automation control and troubleshooting and repair. Introduces identification, installation, replacement, and troubleshooting of automation controller circuit boards and modules. Includes the installation, maintenance and troubleshooting of common input devices. Provides for discussion of methods of motor controls including on-off, proportional, integral, and derivative including PID loop tuning and quality. Covers automation output devices including AC, DC, and servo motors, variable speed drives, relays, motor starters and sizing of components for various applications. Lecture/ Lab: 5.0 credits (105 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IET 1021(0.7) **Course ID: 007135**
Basic Preventive Maintenance
Introduces how routine work is done to keep equipment in good working order and to optimize its efficiency and accuracy. Addresses regular routine cleaning, lubricating, testing, checking for wear and tear and eventually replacing components to avoid breakdown. Lecture/Lab: 0.7 credits (15 contact hours).
Components: Lecture

IET 1022(1.3) **Course ID: 007136**
Advanced Technologies
Introduces various types and styles of predictive and preventive maintenance components, principles, and practices used in industrial applications. Lecture/Lab: 1.3 credits (25.5 contact hours).
Components: Lecture

IET 1041(0.9) **Course ID: 007138**
Drafting Fundamentals
Introduces the fundamental information in drafting necessary to retrieve read, manipulate and understand a mechanical part print. Requires student to be able to identify different types of prints as well as being able to analyze them. Lecture/Lab: 0.9 credits (16.5 contact hours).
Components: Lecture

IET 1042(1.1) **Course ID: 007139**
Orthographic Interpretation
Instructs the learner to recognize, identify, describe, and relate the components used in schematics, along with their symbols and connectors, to describe electrical, electronics, pneumatics, hydraulics, and piping circuits, as well as welding and joining symbols interpretation. Lecture/Lab: 1.1 credits (21 contact hours).
Components: Lecture

IET 1071(1) **Course ID: 007141**
Intro to Basic Electricity
Introduces the various elements of basic electricity including the identification of electrical symbols as well as interpretation of schematics, cross referencing prints, tracing circuits, interpreting sequential function charts, line drawings and time charts. Lecture/Lab: 1.0 credit (21 contact hours).
Components: Lecture

IET 1072(0.3) **Course ID: 007142**
Instruments
Introduces electrical measurement instruments, including digital and analog multimeters, clamp-on ammeters, megohmeters, and the oscilloscope. Requires hands-on lab time spent with each device type. Emphasizes safe measuring techniques. Covers additional devices such as pressure gauges, chart recorders, heat sensors and chain stretch monitor. Lecture/Lab: 0.3 credits (7.5 contact hours).
Components: Lecture

IET 1073(1) **Course ID: 007143**
Control Circuits & Components
Concentrates on control logic components and circuit function. Examines combinational and sequential ladder logic designs with great attention to reliability of function. Requires construction of various circuits that demonstrate key component functionality concepts. Requires troubleshooting using analytical techniques, multimeters, chart recorders, and oscilloscopes. Lecture/Lab: 1.0 credit (22.5 contact hours).
Components: Lecture

IET 1074(0.7) **Course ID: 007144**
Solid State Devices
Introduces solid state devices and applications. Covers semiconductor theory and operational characteristics of devices such as the diode, bipolar junction transistor (BJT) and field effect transistor (FET). Examines the basic DC power supply in the lab. Addresses concepts such as polarity, biasing, rectification and amplification. Includes discussion of camera-type vision systems, barcode readers and laser etchers. Lecture/Lab: 0.7 credits (16.5 contact hours).
Components: Lecture

IET 1081(0.5) **Course ID: 007146**
Basic Mechanical Power Systems
Introduces the basic concepts of mechanical power transmission. Addresses the principles of power transmission, calculations of speed and force and how they affect a power transmission systems ability to perform work. Emphasizes the basics of mechanical drawing, safe work practices for working around machinery, common hand tools associated with maintenance work and some of the more common terms and definitions. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

IET 1082(0.3) **Course ID: 007147**
Flexible Drives
Introduces various types and styles of flexible belt and chain drives, including V-belts, chains, sprockets, and components. Lecture/Lab: 0.3 credit (7.5 contact hours).
Components: Lecture

IET 1083(2.2) **Course ID: 007148**
Couplings and Alignment
Introduces types and functions of couplings used in industrial power transmissions, including how to install, align, and maintain shaft couplings. Lecture/Lab: 2.2 credits (55.5 contact hours).
Components: Lecture

IET 1084(1.1) Course ID: 007149
Bearings, Shafts, and Seals
Introduces basic types and functions of bearings, shafts and seals found on mechanical drive systems commonly used in industry. Lecture/Lab: 1.1 credits (24 contact hours).
Components: Lecture

IET 1085(0.2) Course ID: 007150
Brakes and Clutches
Introduces various types and styles of braking systems and clutch components used in industrial applications. Lecture/Lab: 0.2 credits (4.5 contact hours).
Components: Lecture

IET 1086(0.7) Course ID: 007151
Gears and Cams
Introduces various types and styles of gears and cam follower components used in industrial applications. Lecture/Lab: 0.7 credits (13.5 contact hours).
Components: Lecture

IET 1091(0.7) Course ID: 007153
Basic OSHA Safety
Introduces OSHA and the OSHA regulations that apply to the auto manufacturing industry. Lecture/Lab: 0.7 credits (12 contact hours).
Components: Lecture

IET 1092(0.4) Course ID: 007154
Hoists and Cranes
Introduces the basic concepts and safety rules and issues related to the use of overhead cranes and hoists. Lecture/Lab: 0.4 credit (6 contact hours).
Components: Lecture

IET 1093(1.2) Course ID: 007155
Rigging Awareness & Fundamentals
Introduces the basic concepts and safety rules and issues related to the use of rigging equipment, attachment components, calculating sling angle stresses, and safe lifting and turning loads. Lecture/Lab: 1.2 credits (25.5 contact hours)
Components: Lecture

IET 1094(0.7) Course ID: 007156
First Aid, CPR, & AED
Provides knowledge and skills necessary to help sustain life and minimize the consequences of injury or sudden illness until advanced medical help arrives. Includes first aid, CPR and AED lessons to meet the various training needs of those in workplace, school or community settings. Lecture/Lab: 0.7 credits (16.5 contact hours).
Components: Lecture

IET 1101(0.5) Course ID: 007182
Introduction to Arc Welding
Introduces the power sources used in shielded metal arc welding (SMAW) and gas metal arc welding (GMAW), along with equipment and filler metals used to produce a welded joint and welding principles along with the metallurgy of steel and welding. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

IET 1102(1.6) Course ID: 007183
SMAW/Stick Welding
Introduces shielded metal arc welding (SMAW) safety and shielded metal arc welding (SMAW) processes including flat, horizontal, vertical, and overhead welding techniques. Lecture/Lab: 1.6 credits (45 contact hours).
Components: Lecture

IET 1103(0.9) Course ID: 007184
Gas Metal Arc Welding
Provides knowledge of theory, safety practices, equipment and techniques required for gas metal arc welding (GMAW) including different transfer methods and position welding. Lecture/Lab: 0.9 credits (25.5 contact hours).
Components: Lecture

IET 1104(1) Course ID: 007185
Welding and Fabrication
Introduces oxy-fuel welding and cutting, including safety, setup and maintenance of oxy-fuel welding and cutting equipment. Includes cutting, brazing, and welding techniques. Lecture/Lab: 1.0 credits (22.5 contact hours).
Components: Lecture

IET 1201(0.1) Course ID: 007187
Intro to Machining Operations
Introduces machining operations. Focuses on the safe application of the most common machining procedures and machines used by multi-skilled industrial maintenance technicians. Lecture: 0.1 credits (1.5 contact hours).
Components: Lecture

IET 1202(0.6) Course ID: 007188
Turning
Introduces safe operation of lathes, primarily engine and tool room lathes. Addresses various types of lathes used in industry, their component parts, and associated safety precautions. Emphasizes the most common lathe operations required by multi-skilled industrial maintenance technicians. Lecture/Lab: 0.6 credits (16.5 contact hours).
Components: Lecture

IET 1203(0.8) Course ID: 007189
Milling
Introduces safe operation of milling machines, primarily vertical milling machines. Addresses the various types of milling machines used in industry, their component parts, and associated safety precautions. Emphasizes the most common milling operations required by multi-skilled industrial maintenance technicians. Lecture/Lab: 0.8 credits (22.5 contact hours).
Components: Lecture

IET 1204(0.5) Course ID: 007190
Drill Press
Introduces safe operation of drill presses, primarily the sensitive drill press. Addresses the various types of drilling machines used in industry, their component parts, and associated safety precautions. Emphasizes the most common drilling operations required by multi-skilled industrial maintenance technicians. Lecture/Lab: 0.5 credits (13.5 contact hours).
Components: Lecture

IET 1205(0.4) Course ID: 007191
Saws
Introduces safe operation of saws, primarily the horizontal and contour band saw. Addresses the various types of metal saws used in industry, their component parts, and associated safety precautions. Emphasizes the most common sawing operations required by multi-skilled industrial maintenance technicians. Lecture/Lab: 0.4 credits (10.5 contact hours).
Components: Lecture

IET 1206(0.7) Course ID: 007192
Hand and Power Tools
Introduces safe and effective use of hand and power tools. Emphasizes the application of the most common tools used by multi-skilled industrial maintenance technicians. Lecture/Lab: 0.7 credits (16.5 contact hours).
Components: Lecture

IET 1301(1) Course ID: 016097
Safety Culture
Introduces the importance of cultivating daily safe work habits and the predictable negative results of not being safety conscious in the work place. Instructs the students in basic safety culture and prepares them to participate in, conduct, and lead safety walk-throughs. Introduces the student to Kiken Yoshi Training (KYT) or Hazard Prediction Training. Prepares the student to conduct risk assessment activities, construct safety boards, and formulate individual safety commitments. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

IET 1302(1) Course ID: 016098
5S
Introduces the fundamental 5S process involving the five step progression described by the Japanese words Seiri, Seiton, Seiso, Seiketsu, and Shitsuke. Instructs the students in the sequence involving classifying and sorting, ordering and aligning, cleaning and sweeping up, standardizing, and developing a process of sustainable practice in the workplace. Fosters the development of a workplace organization in which safety and efficiency are always paramount. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

IET 1303(1) Course ID: 016099
Total Production Management
Instructs the student in the concepts of value-added product, maintenance value-added product, value-added work and necessary work. Explains the process of how Toyota earns profit. Demonstrates the Toyota Production System for Maintenance using the House framework. Describes and explains the three Ms and the seven Mudas and their relationship to maintenance and production. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

IET 1304(1) Course ID: 016100
Problem Solving
Introduces the Toyota Business Practice model, the 8 step Toyota Problem Solving method, and the 10 part Toyota Drive and Dedication model. Instructs the students to clarify the problem, break it down to analyze it, set achievable targets, analyze the root cause, develop countermeasures, evaluate results and the process, standardize the results, and learn from failures. Fosters the development of a customer first philosophy involving all the stakeholders. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

IET 1305(1) Course ID: 016101
Maintenance Reliability
Introduces the Toyota Maintenance Reliability training. Describes the difference between corrective maintenance and preventive maintenance. Breaks down proactive maintenance and the underlying tools and constituent processes. Instructs the students in the various individual units in a system and the steps in evaluating failure mode risks and countermeasures. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

IET 2011(1) Course ID: 007179
Electrohydraulics/Pneumatics Fundamentals
Explains the fundamental concepts of fluid power. Covers the principles of fluid power, calculations of physical properties of fluids and their ability to do work. Introduces the various fluid power components, symbols, circuits. Introduces troubleshooting of fluid power components and systems with an emphasis on safety. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

IET 2012(0.7) Course ID: 007178
Reservoirs, Fluids, Filters
Introduces functions of hydraulic/pneumatic reservoirs and reservoir components. Addresses properties and requirements for fluids, as well as how filters are used to maintain cleanliness in fluid power systems. Lecture/Lab: 0.7 credits (13.5 contact hours).
Components: Lecture

IET 2013(0.4) Course ID: 007177
Hose, Piping, and Tubing
Introduces various types of conductors that carry fluid through a system. Focuses on fittings, hose, and steel tubing used in fluid power systems. Lecture/Lab: 0.4 credits (9 contact hours).
Components: Lecture

IET 2014(0.8) Course ID: 007176
Pumps, Actuators, Accumulators
Introduces the different types of pumps, actuators and accumulators used in fluid power systems which create flow, change fluid power into mechanical power and devises that store energy in the system. Lecture/Lab: 0.8 credits (16.5 contact hours).
Components: Lecture

IET 2015(1.3) Course ID: 007175
Valves
Explains hydraulic and pneumatic directional control, pressure control and flow control valves. Lecture/Lab: 1.3 credits (28.5 contact hours).
Components: Lecture

IET 2016(0.9) **Course ID: 007174**
Electrohydraulics/Pneumatics
Introduces the fundamentals of electro-fluid power, including basic electrical principles, basic fluid power principles, electro-fluid power limit devices, common electro-fluid power troubleshooting principles and practices. Lecture/Lab: 0.9 credits (18 contact hours).
Components: Lecture

IET 2017(0.9) **Course ID: 007173**
Systems Troubleshooting
Introduces troubleshooting of hydraulic and pneumatic systems, including tracing out systems, isolating problems, safely testing and inspecting systems that use combination circuits and combined electro-hydraulic/pneumatic systems. Lecture/Lab: 0.9 credits (19.5 contact hours).
Components: Lecture

IET 2031(0.6) **Course ID: 007171**
Introduction to PLCs
Introduces various elements of basic PLCs including the identification of programmable logic control systems as well as an overview of PLC system architectures. Provides instruction in basic numbering systems, computer terminology, PLC functions, program structures, language standards, point addressing basics. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

IET 2032(1.4) **Course ID: 007170**
Hardware & Software
Introduces memory and project organization within a PLC processor, the installation, wiring and configuration of I/O modules, as well as how to start a new project. Lecture/Lab: 1.4 credits (31.5 contact hours).
Components: Lecture

IET 2033(1.5) **Course ID: 007169**
Programming PLCs
Introduces various elements of programming PLCs. Addresses the basic elements of PLC programming and routines. Requires student to program using ladder logic, structured text, sequential function chart, and function block languages. Lecture/Lab: 1.5 credits (34.5 contact hours).
Components: Lecture

IET 2034(1.5) **Course ID: 007168**
PLC Communication
Introduces various elements of industrial communications using PLCs. Addresses common types of control communications in an industrial environment. Includes discussion of PLC addressing used in communications. Lecture/Lab: 1.5 credits (34.5 contact hours).
Components: Lecture

IET 2051(0.6) **Course ID: 007166**
Introduction to Robotics
Introduces robotics in regard to industrial robotic safety standards, historic timeline of industrial robots, industrial classification of robots, common industrial applications of robots, basic system components found in industrial robot applications, robotic motion concepts, common terms and definitions used in computer integrated manufacturing (CIM) as it relates to robots. Lecture/Lab: 0.6 credits (10.5 contact hours).
Components: Lecture

IET 2052(1.5) **Course ID: 007165**
Programming/Editing Robots
Introduces robotic systems and programming. Reviews robotic system application, automated system safety, robotic system composition, robotic motion control, fundamental programming commands, and program editing. Emphasizes the fundamentals of robot control. Aids students in electronics, welding, computer technology, and general sciences. Lecture/Lab: 1.5 credits (30 contact hours).
Components: Lecture

IET 2053(0.2) **Course ID: 007164**
Robot and Preventive Maintenance
Instructs an operator, technician, engineer, programmer, or student to master the preventive maintenance techniques required for a robot and their backup systems. Lecture/Lab: 0.2 credits (4.5 contact hours).
Components: Lecture

IET 2054(1.1) **Course ID: 007163**
Error Codes & Troubleshooting
Instructs operators, technicians, engineers, programmers, or students on the basic recovery procedures needed to interpret robot error codes and perform a safe recovery start up procedure on robotics equipment. Lecture/Lab: 1.1 credits (22.5 contact hours).
Components: Lecture

IET 2055(0.6) **Course ID: 007162**
Integration of PLCs & Robots
Introduces concepts associated with integrating robotic applications in a PLC-controlled, automated system. Includes discussion of the standard safety and interface signals associated with integrated systems, as well as various types of robotic applications along with the interface signals typically associated with each application. Stresses the programming concepts that support optimizing cycle time. Lecture/Lab: 0.6 credits (15 contact hours).
Components: Lecture

IET 2061(0.5) **Course ID: 007160**
Fundamentals
Introduces identification, installation, replacement, and troubleshooting of automation controller circuit boards and modules. Lecture/Lab: 0.5 credits (10.5 contact hours).
Components: Lecture

IET 2062(0.9) **Course ID: 007159**
Sensors and Photoeyes
Introduces installation, maintenance and troubleshooting of common input devices. Lecture/Lab: 0.9 credits (18 contact hours).
Components: Lecture

IET 2063(0.6) **Course ID: 007158**
Calibration and Loop Training
Introduces methods of motor control including on-off, proportional, integral, and derivative including PID loop tuning and quality. Lecture/Lab: 0.6 credits (13.5 credits).
Components: Lecture

IET 2064(3) **Course ID: 007157**
Final Control Elements
Covers automation output devices including AC, DC, and servo motors, variable speed drives, relays, motor starters and sizing of components for various applications. Lecture/Lab: 3.0 credits (63 contact hours).
Components: Lecture

IEX Industrial Core

IEX 291(1) **Course ID: 001575**
Instructor Consent Required
Special Problems I
This course is designed for the student who has demonstrated specific needs. Prerequisite: Permission of Instructor
Components: Laboratory
Attributes: Technical

IEX 293(2) **Course ID: 001576**
Instructor Consent Required
Special Problems II
This is a course designed for the student who has demonstrated specific needs. Prerequisite: Permission of Instructor
Components: Laboratory
Attributes: Technical

IEX 295(3) **Course ID: 001577**
Instructor Consent Required
Special Problems III
This is a course designed for the student who has demonstrated specific special needs. Prerequisite: Permission of Instructor
Components: Laboratory
Attributes: Technical

IEX 297(4) **Course ID: 005346**
Special Problems IV
Designed for the student who has demonstrated specific special needs. Laboratory: 4 credits (180 contact hours).
Components: Laboratory
Attributes: Technical

IFM Informatics

IFM 111(3) **Course ID: 007270**
Client-side Informatics Software
Examines client-side informatics software used to define, analyze, design, collect, structure, manage, and share organizational data. Examines data through charting and statistical analysis. Applies informatics concepts using industry-standard software, such as spreadsheet packages, database management systems, data/document sharing software, and collaboration software. Pre-requisite: Computer Literacy or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IFM 128(3) **Course ID: 007271**
Principles of Informatics
Introduces students to the concepts associated with an information-centric world, information systems, and includes the definition of information and how it is communicated. Prepares students to understand how information systems support data-driven decision making strategies, information sharing technologies, data encoding, cooperative skills, knowledge sharing, and organizing of information. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IFM 130(3) **Course ID: 007272**
Business Data Communications
Introduces students to data communications terminology and concepts used in business. Introduces students to network design and analysis. Provides a survey of network planning, implementation and administration. Provides an overview of commercial networking hardware and software products and the methodologies used for their evaluation. Introduces students to data and network security. Introduces students to data storage, database systems and data extraction across various network and client-side devices. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IFM 211(3) **Course ID: 007273**
Collaboration Software
Examines collaboration software and how it is commonly used in informatics environments and within organizations. Prepares students to design, develop, implement and manage team collaboration sites. Pre-requisite: Computer Literacy. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IFM 215(3) **Course ID: 007274**
Information Systems Analysis
Introduces students to systems analysis and general design; analysis strategies, tools, and techniques for documenting current systems and developing proposed systems; systems modeling, data modeling, cost/benefit trade-offs, and project management; and development of a comprehensive systems analysis project. Pre-requisite: Digital Literacy or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IFM 225(3) **Course ID: 007275**
Advanced Informatics
Examines advanced informatics concepts related to designing, analyzing, organizing, securing, managing, and mining databases. Examines such topics as data corruption, efficiency in design and implementation, data mining, database connectivity, and network and security basics. Pre-requisite: Computer Literacy. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IFM 235(3) **Course ID: 007276**
Information Systems and Business Intelligence
Introduces students to the fundamentals of information systems and business intelligence. Prepares both business and information technology students to understand how information systems and business intelligence provides a basis for the decisions needed to be competitive in the global marketplace. Pre-requisite: Digital Literacy or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD Information Management and Design

IMD 100(3) **Course ID: 004764**
Digital Information & Communication Technologies
Introduces digital and social media concepts and technologies. Examines hardware, operating systems, applications, telecommunications, digital defense, ethics, and social media. Utilizes Windows operating system plus word processing, spreadsheet, database, and presentation applications. Emphasizes social media practices and concepts. This course fulfills the digital literacy requirement. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Digital Literacy

IMD 114(3) **Course ID: 005748**
Information Literacy
This course is an introduction to the use of information resources, both traditional print materials and online materials, for academic and professional research. Topics include development of search strategy, evaluation of resources, use of database search techniques, ethical and legal aspects of information management and documentation of sources. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 115(3) **Course ID: 004765**
Introduction to Graphic Design
Introduces theory, concepts and techniques required in graphic design. Includes an introduction to layout; color theory and use; design, photo and illustration techniques; and exploration of media in respect to digital design. Integrates concepts regarding the production process including pre-press, printing, other production techniques and distribution. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 117(3) **Course ID: 004767**
Keyboarding and Basic Word Processing
Students use a microcomputer and software to develop proper techniques of touch keyboarding. Basic word processing skills are integrated with a thorough study of form, style, and arrangement of business documents. Speed, accuracy and control are emphasized. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Computer Literacy, Technical

IMD 124(3) **Course ID: 016264**
Introduction to Game Development
Presents an overview of the game development process including game development history, platforms, goals, genres, players, story and character development, gameplay, levels, interfaces, audio, development processes, development team roles, marketing, and maintenance. Provides opportunities to play and analyze games and to complete portions of game designs. Pre-requisite: CIT105 OR IMD100 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Course Equivalents: CIT 124
Attributes: Technical

IMD 126(3) **Course ID: 004781**
Introduction to Desktop Publishing
The use of microcomputers for designing and producing various publications is introduced. Hands-on experience is provided in using desktop publishing software and a laser printer to produce high-resolution publications, such as flyers, brochures, business forms, and newsletters. Students are also introduced to basic design techniques, type and graphics layout, and the related terminology. Prerequisite: IMD 100 or equivalent skills. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 127(3) **Course ID: 005044**
Vector Design with Adobe Illustrator
In this course, students will be introduced to and develop vector (line-based) graphics using industry-standard application(s). Topics covered will include examining the theory behind vector graphics, investigating the advertising and print industry's use of this type of graphic, creation of graphics from simple to increasingly complex, as well as development of a portfolio of vector art. Prerequisite: IMD 115 or concurrent or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 128(3) **Course ID: 005045**
Raster Design with Adobe PhotoShop
Introduces raster (photo or pixel-based) graphics using industry standard application(s). Covers the theory behind raster graphics, investigating the advertising and print industries' use of this type of graphic, creation and manipulation of raster-based graphics from simple to increasingly complex, the use of Photoshop in web design, video editing and compositing with Photoshop, as well as development of a portfolio of raster art and photo editing and manipulation samples. Prerequisite: IMD 100 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 133(3) **Course ID: 005046**
Beginning Web Design
Introduces the creation and publication of a web site and covers extensible hypertext markup language (XHTML) and introductory cascading style sheets (CSS). Covers hand-coding for web design, along with the incorporation of graphics into web sites and publishing. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 180(3) **Course ID: 004786**
Intermediate Web Design
Utilizes content management systems (CMS) for web design with an emphasis on custom theme development. Instructs students in basic CMS setup, administration, and theme design. Utilizes HTML, CSS, and photo-editing software within a CMS. Identifies fundamentals including website layout, navigation, font usage, color schemes, site architecture, with emphasis on creating websites that effectively communicate the desired content for employers and clients. Pre-requisite: IMD 133 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 210(3) **Course ID: 004787**
Microsoft Office Applications
Presents advanced skills utilizing Microsoft Office applications for the creation, manipulation, and integration of information. Examines applications including word processing, spreadsheet, database management, and presentation. Prerequisite: IMD 100 OR Digital Literacy Course OR Instructor Consent. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 221(3) **Course ID: 016265**
Computer Graphics
Introduces basic computer graphics with an emphasis on graphics for game design. Instructs students in practical aspects of graphics such as color, ray tracing, rasterization, shading, mapping, light, and shadow. Pre-requisite: CIT105 OR IMD100 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Course Equivalents: CIT 221
Attributes: Technical

IMD 222(3) **Course ID: 016266**
3D Modeling for Video Games
verb.): Instructs students in the use of industry-standard 3D modeling software specific to the video-game industry. Emphasizes both architectural and character modeling. Familiarizes the student with key 3D modeling concepts and methods, workflow, and the creation and preparation of 3D assets for use specifically in a video-game application. Pre-requisite: CIT 221 OR IMD 221 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Course Equivalents: CIT 222
Attributes: Technical

IMD 223(3) **Course ID: 016267**
3D Animation for Video Games
Exposes students to the specialized process of animating 3D assets for gaming applications. Familiarizes students with animating both organic and inorganic assets, lighting scenes, rendering and producing cut-scenes, and preparing character assets for in-game motion. Allows students to acquire the necessary skills and techniques to integrate audio with their animations using basic sound-engineering software and processes.
Components: Lecture
Course Equivalents: CIT 223
Attributes: Technical

IMD 226(3) **Course ID: 004791**
Advanced Desktop Publishing
Requires the demonstration of vital pre-press and print production knowledge necessary for successful output of commercial graphic design projects. Emphasizes raster image creation, editing, and preparation for output, offset printing processes, color separations, spot color usage and preparation, vector graphic usage, font usages and standards, PDF document creation and preparation, and advanced desktop publishing techniques. Prerequisite: IMD 126 and IMD 127 and IMD 128. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 228(3) **Course ID: 006833**
Advanced Photoshop
Introduces advanced techniques for manipulating and editing raster (photo or pixel-based) graphics using industry-standard application(s). Examines new software features, advanced methods for file optimization and color correction, making complex selections and combining multiple images to create works of art, as well as development of a professional portfolio of raster art and photo editing and manipulation samples. Pre-requisite: IMD 115 and IMD 128. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 229(3) **Course ID: 006886**
Advanced Illustrator
Introduces advanced techniques for the creation of vector-based (Bezier-geometry-based) artwork, including techniques for high-end illustrative and artistic projects. Emphasizes working with painterly and naturalistic brushes, photo-realistic vector-based image creation, advanced gradient mesh usage, advanced 3D techniques, integration with Adobe Flash, advanced workflow procedures, and other techniques intended for intermediate to advanced Adobe Illustrator users. Pre-requisite: IMD 127. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 230(3) **Course ID: 004793**
Advanced Web Design
Explores existing and emerging web technologies through the role of web designers. Covers HTML, CSS and content management systems (CMS) for responsive web design. Instructs students in responsive website development using HTML, CSS and photo-editing software. Students will conclude the course via the creation of a comprehensive, dynamic, responsive website utilizing current technologies. Pre-requisite: IMD 180 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 232(3) **Course ID: 004794**
Web Design with Adobe Dreamweaver
Utilizes an advanced web authoring software application for design and development. Uses a professional WYSIWYG (what-you-see-is-what-you-get) editor to develop and create web pages, automate production, and manage and maintain entire websites. Builds XHTML, CSS, and web development knowledge to customize features and integrate applications. Prerequisite: IMD 133 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 235(3) **Course ID: 004795**
Advanced Word Processing
Students will learn current word processing software from intermediate skills through advanced utilities. Topics include producing customized documents, enhancing the visual display of documents, creating customized desktop publishing documents, organizing text in documents using advanced features, and integrating data utilizing various applications. Emphasis will be on mastering the software for optimal use. Prerequisite: IMD 210 or CIT 130, or equivalent skills. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 240(3) **Course ID: 004796**
Multimedia Development for the Web
Introduces students to the design and delivery of interactive and media-rich websites using professional, industry-standard software and web development technologies. Covers creating and integrating animation into web design, along with developing increasing interactivity and adding audio and video into a website. Covers publishing and integration with other web development applications. Prerequisite: IMD 133 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 250(3) **Course ID: 005050**
Digital Video Editing I
Covers the essentials of digital video within cinematic arts, including logging, capturing, editing, and basic compositing. Students will capture and edit digital video using industry-standard desktop video software and export to DVD and the Internet for use in entertainment, documentary films, commercials, and newscasts. Students will learn to storyboard, plan, and produce a digital video project from conception to final packaging. Prerequisite: IMD 100 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 255(3) **Course ID: 007327**
Digital Video Editing II
Covers advanced techniques within cinematic arts and editing such as multi-cam editing, color correction, advanced compositing, basic audio editing and production, alpha channels, and special effects. Building on Digital Video Editing I, students will also focus on creating storyboards, quicker workflows, and trim editing using an industry-standard software program. Increased levels of pacing, timing, continuity, and visual aesthetics are emphasized. Students will shoot and edit their own video footage in this course. Cameras will be provided. Pre-requisite: IMD 250 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 258(3) **Course ID: 007328**
Visual Effects for Video
Covers the creation of visual effects in cinematic arts including basic animation with text and 2D objects and 3D object creation and animation using an industry-standard visual effects software program. Students will focus on animating layers and working with masks, distortion, color correction, motion stabilizing, and particle simulation. Projects will be exported and packaged for the web and DVD. Pre-requisite: IMD 250 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

IMD 270(3) **Course ID: 005214**
Professional Practices
Designed to assist students develop strategies for entering the Information Management & Design profession by editing and refining portfolios and creating correspondence to meet professional standards, designing resumes and other self-promotional materials, developing a job search strategy, practicing interview techniques, and professional presentations. Prerequisite: sophomore status & preparing for job search. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 271(1 - 3) **Course ID: 004797**
Instructor Consent Required
Internship
Requires a minimum of 40 clock hours per credit hour of on-the-job experience to include a learning plan agreed upon by the student, instructor, and site supervisor. Prerequisite: Consent of Instructor, 2.0 GPA, IMD 270 and the completion of 9 additional credit hours of IMD course work. Practicum: 1.0 -3.0 credits (40-120 contact hours).
Components: Practicum
Attributes: Technical

IMD 272(3) **Course ID: 016268**
Game Design Theory
Introduces students to the experience-oriented standards and techniques of gaming on a digital platform. Includes hands-on conceptualization and writing of a game created by the student. Emphasizes creativity, player experiences and motivations, styles of play, types of games, character creation, world creation, and story-driven narrative within a video game. Requires students to write a complete and industry-quality Game Design Document as a final project in this course which can serve as the basis for a fully-produced, playable video game in CIT/IMD273. Pre-requisite: CIT124 OR IMD 124 OR Consent of Instructor. Lecture: 3.0 (45 contact hours).
Components: Lecture
Course Equivalents: CIT 272
Attributes: Technical

IMD 273(3) **Course ID: 016269**
Game Production
Provides students with the opportunity to produce a fully playable 3D video game using assets and materials created in previous courses; employs an industry-standard game engine to meld 3D content, audio, narrative, character, and environment into a professional and enjoyable video game experience. Pre-requisite: ((CIT 222 OR IMD 222) AND (CIT 272 OR IMD 272)) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Course Equivalents: CIT 273
Attributes: Technical

IMD 274(3) **Course ID: 016270**
Seminar in Game Development
Encompasses the three phases of game design and development: conception, creation, and marketing in this project-oriented seminar. Requires participation in class presentations, individual and group projects, development of a game, and a portfolio. Pre-requisite: ((CIT 223 OR IMD 223) AND (CIT 273 OR IMD 273)) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Course Equivalents: CIT 274
Attributes: Technical

IMD 275(3) **Course ID: 004798**
Information Management and Communications
Introduces management principles and techniques as they apply to various types of businesses. Includes research emphasis on information management, team concepts, personnel management, communications and business plans. Explores concepts within freelance, small business, and corporate entities. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 277(3) **Course ID: 006837**
Typography
Explores the use of typography in the context of graphic design and discover the importance of type as a tool for visual problem solving and communication. Explores origins of typography, font usage, the anatomy and different kinds of type, software used for type manipulation, and how basic principles and elements of design (color, hierarchy, form, rhythm, etc.) are applied to typography. Requires the development of portfolio of individual typography-based designs. Pre-requisite: (IMD 115 and IMD 126 and IMD 127and IMD 128) or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 280(3) **Course ID: 004799**
Portfolio Practicum: Graphic Design
Provides an opportunity to assemble a comprehensive graphic design portfolio using skills learned within the IMD Graphic Design core courses, which will assess students overall graphic design skills. Provides IMD students with a professional design portfolio to aid in the search for employment. Provides the capstone for students choosing the graphics option. Uses presentation, vector, raster, and desktop publishing software to create design-intensive portfolio pieces. Prerequisite: (IMD 127 and IMD 128 and IMD 185 and IMD 226) or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 290(3) **Course ID: 005779**
Photography
Teaches students basic photography principles and skills to compose technically proficient photographs. Emphasis is on basic camera operations, with exploration of film speeds, apertures, and shutter speeds. Explores composition and elements of lighting. Uses slide lectures, a brief overview of contemporary photography to acquaint students with past and current photography. Lecture: 3 Credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 292(3) **Course ID: 005215**
Portfolio Practicum: Web Design
Requires a comprehensive web site design portfolio using skills learned in the IMD Web Design core courses to assess students' overall skills learned in the web design option. Provides IMD students with a professional design portfolio to aid in the search for employment. Uses industry-standard design software programs and dynamic scripting languages to assemble the comprehensive design portfolio. Pre-requisite: IMD 133, 180 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

IMD 294(3) **Course ID: 005799**
Seminar IMD Technologies
Includes research, study, and discussion of a current or emerging topic, issue, or trend in information management and design technologies. May be repeated with different topic for a maximum of 6 credit hours. Prerequisite: IMD 100 or consent of instructor. Lecture:3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 299(1 - 3) **Course ID: 004800**
Instructor Consent Required
Selected Topics in Information Management and Design
This course is designed to expand course offerings as new technology is developed, as well as consider contemporary and/or emerging trends in information management and design. Topics may vary from semester to semester at the discretion of the instructor; course may be repeated with different topics to a maximum of six credit hours. Prerequisite: Consent of instructor. Lecture: 1-3 credits (15-45 contact hours).
Components: Lecture
Attributes: Technical

IMG Radiography

IMG 100(7) **Course ID: 004294**
Radiography I
Emphasizes the historical perspective, professional ethics, introductory imaging, x-ray tube, patient management, and the role of the radiographer as a member of the health care team. Applies the principles of human anatomy to the study of fundamental radiographic procedures (exposure factors and patient positioning) used for different age groups. Covers procedures of the chest, abdomen, extremities, shoulder girdle, bony thorax, and pelvic girdle. Prerequisite: Admission to the Radiography Program and BIO 139 with a minimum grade of C. Co-requisite: IMG 101. Lecture: 6.0 credits (90 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

IMG 101(4) **Course ID: 004295**
Clinical I
Provides experience in equipment operation, patient care technical factors for radiographic exposures, and in positioning patients accurately for radiographic exams. Prerequisite: Admission to the Radiography Program and BIO 139 with a minimum grade of C. Corequisite: IMG 100. Clinical: 4.0 credits (240 contact hours).
Components: Clinical
Attributes: Technical

IMG 104(2) **Course ID: 005604**
Introduction to Radiography
Introduces radiography with emphasis on the historical perspective, professional requirements, health care environment, cultural diversity, and legal and ethical considerations. Incorporates basic tube function and radiation protection. Prerequisite: BIO 137 with a minimum grade of C. Prerequisite or Corequisite: BIO 139. If taken as a pre-requisite, a minimum grade of C is required. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

IMG 106(2) **Course ID: 005605**
Patient Care in Radiography
Examines basic concepts of care relative to patient physical circumstances as well as to the needs of patient and family. Includes communication skills, safety considerations, and infection control. Prerequisite: BIO 137 with a minimum grade of C. Prerequisite or corequisite: BIO 139. If taken as a pre-requisite, a minimum grade of C is required. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

IMG 108(4) **Course ID: 005606**
Radiographic Procedures I
Presents the principles of human anatomy as applied to fundamental radiographic procedures. Included are exposure factors and patient positioning relative to different age groups and to upper and lower extremities, bony and visceral thorax, and abdomen with consideration given to the evaluation of optimal diagnostic images. Prerequisite: BIO 137 with a minimum grade of C. Prerequisite or Corequisite: BIO 139. If taken as a pre-requisite, a minimum grade of C is required. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

IMG 109(1) **Course ID: 005607**
Clinical Practice I
Provides structured clinical experience through sequential competency-based assignments that focus on the upper and lower extremities, bony and visceral thorax, and abdomen. Prerequisite: BIO 137 with a minimum grade of C. Prerequisite or Corequisite: BIO 139. If taken as a pre-requisite, a minimum grade of C is required. Clinical: 1.0 credit (60 contact hours).
Components: Clinical
Attributes: Technical

IMG 110(7) **Course ID: 004296**
Radiography II
Emphasizes radiographic imaging, related technical factors, and accessories. Applies human anatomy principles to basic radiographic procedures. Includes study of tomography and procedures used for the basic and complex skulls, vertebral column, alimentary canal, and the biliary and urinary systems. Considers special radiographic examinations and equipment. Prerequisite: IMG 100 with a minimum grade of C. Corequisite: IMG 111. Lecture: 6.0 credits (90 contact hours). Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

IMG 111(4) **Course ID: 004297**
Clinical II
Continues IMG 101 to provide experience with equipment operation, patient care, and procedures for accurate radiographic exposures. Encourages increasing responsibility and autonomy as students build on previously-learned procedures. Prerequisite: IMG 101 with a grade of "C" or greater. Corequisite: IMG 110. Clinical: 4.0 credits (240 contact hours).
Components: Clinical
Attributes: Technical

IMG 114(2) **Course ID: 005608**
Image Production & Acquisition
Provides knowledge-base related to image production and acquisition, and practical experience with digital imaging systems. Prerequisite: (IMG 104 and IMG 106 and IMG 108 and IMG 109) with a minimum grade of C. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

IMG 116(2) **Course ID: 005609**
Advanced Patient Care in Radiography
Examines the basic concepts of medical emergency response and pharmacology related to radiography. Addresses informed consent practices and the use of imaging contrast agents, venipuncture and IV therapy. Includes familiarization to professional practice standards. Prerequisite:(IMG 104 and IMG 106 and IMG 108 and IMG 109) with a minimum grade of C. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

IMG 118(4) **Course ID: 005610**
Radiographic Procedures II
Continues procedures instruction with emphasis on the vertebral column, cranium, gastrointestinal, urinary, and special radiographic procedures. Focuses on the evaluation of optimal diagnostic images. Prerequisite: (IMG 104 and IMG 106 and IMG 108 and IMG 109) with a minimum grade of C. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

IMG 119(3) **Course ID: 005611**
Clinical Practice II
Provides structured clinical experience through competency-based assignments focusing on the upper and lower extremities, bony and visceral thorax, and abdomen. Prerequisite: (IMG 104 and IMG 106 and IMG 108 and IMG 109) with a minimum grade of C. Clinical: 3.0 credits (180 contact hours).
Components: Clinical
Attributes: Technical

IMG 201(3) **Course ID: 004298**
Clinical III
Continues IMG 111 to provide experience with equipment operation application of patient care, set-up of correct technical factors for radiographic exposures, and positioning patients accurately for radiographic exams. Provides opportunities for more responsibility and independence with previously learned procedures. Requires performance of a critical evaluation of finished radiograph with emphasis on acceptable technical exposure factors and accurate patient and anatomical position. Prerequisite: IMG 111 with a grade of "C" or greater. Clinical: 3.0 credits (180 contact hours).
Components: Clinical
Attributes: Technical

IMG 209(3) **Course ID: 005612**
Clinical Practice III
Provides clinical experience through structured sequential competency based clinical assignments to include the upper and lower extremities, bony and visceral thorax, abdomen, vertebral column, cranium, and contrast studies of the digestive, urinary, and central nervous systems, and arthrography. Prerequisite: (IMG 114 and IMG 116 and IMG 118 and IMG 119) with a minimum grade of C. Clinical: 3.0 credits (180 contact hours).
Components: Clinical
Attributes: Technical

IMG 210(4) **Course ID: 004299**
Radiography IV
Covers theories and principles involved in the production, control, and application of ionizing radiation in radiography. Emphasizes the development of a quality assurance program, quality control testing of radiographic equipment, and image intensification. Prerequisite: IMG 201 with a grade of "C" or greater. Co-requisite: IMG 211. Lecture: 3.0 credit (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

IMG 211(6) **Course ID: 004300**
Clinical IV
Continues IMG 201 to provide experience with equipment operation, application of patient care, set-up of correct technical factors for radiographic exposures, and positioning patients accurately for radiographic exams. Provides opportunities for more responsibility and independence with previously learned procedures. Prerequisite: IMG 201 with a grade of "C" or greater. Co-requisite: IMG 210. Clinical: 6.0 credits (360 contact hours).
Components: Clinical
Attributes: Technical

IMG 214(2) **Course ID: 005613**
Imaging Equipment
Focuses on the types of imaging equipment used in radiography including x-ray imaging systems, fluoroscopy, tomography, screens, film, and automatic processing. Introduces quality management in radiography. Prerequisite: IMG 209 with a minimum grade of C. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

IMG 216(1) **Course ID: 005614**
Basic Computed Tomography
Examines basic computed tomography (CT), including imaging formation, equipment, and terminology, with focus on scanning techniques of the head, neck, chest, abdomen and pelvis, and sectional anatomy. Prerequisite: IMG 209 with a minimum grade of C. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

IMG 219(6) Course ID: 005618
Clinical Practice IV
Provides structured clinical experience through competency-based assignments that focus on the extremities, bony and visceral thorax, abdomen, vertebral column, and cranium. Includes arthrography and contrast studies of the digestive urinary, and central nervous systems, as well as basic CT scanning procedures. Prerequisite: IMG 209 with a minimum grade of C. Clinical: 6.0 credits (360 contact hours).
Components: Clinical
Attributes: Technical

IMG 220(4) Course ID: 004301
Radiography V
Introduces equipment and advanced modalities used to complement diagnostic radiology. Includes principles of radiation biology, radiation protection, pathology and the systematic classifications of disease. Provides for a discussion of professional and legal standards. Prerequisite: IMG 210 with a grade of "C" or greater. Corequisite: IMG 221. Lecture: 3.0 credits (45 contact hours) Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

IMG 221(6) Course ID: 004302
Clinical V
Continues IMG 211 to provide experience with equipment operation, application of patient care, set-up of correct technical factors for radiographic exposures, and positioning patients accurately for radiographic exams. Provides opportunities for more responsibility and independence with previously learned procedures. Prerequisite: IMG 211 with a grade of "C" or greater. Corequisite: IMG 220. Clinical: 6.0 credits (360 contact hours).
Components: Clinical
Attributes: Technical

IMG 224(2) Course ID: 005615
Radiation Protection & Biology
Examines principles of radiation protection and measurement, as well as basic radiation biology principles, particularly the effects of various radiation levels on living organisms. Prerequisite: (IMG 214 and IMG 216 and IMG 219) with a minimum grade of C. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

IMG 226(1) Course ID: 005616
Radiographic Pathology
Examines concepts related to disease and etiology with emphasis on radiographic indicators of disease and their impact on exposure factor selection. Prerequisite: (IMG 214 and IMG 216 and IMG 219) with a minimum grade of C. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

IMG 228(2) Course ID: 005619
Radiography Seminar
Introduces the format, rules, and regulations regarding certification by the American Registry of Radiologic Technologists (ARRT) and state certification requirements. Prerequisite: (IMG 214 and IMG 216 and IMG 219) with a minimum grade of C. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

IMG 229(6) Course ID: 005617
Clinical Practice V
Provides structured clinical experience through competency-based assignments that focus on the extremities, bony and visceral thorax, abdomen, vertebral column, and cranium. Includes arthrography and contrast studies of the digestive, urinary, and central nervous systems, as well as basic CT scanning procedures. Prerequisite: (IMG 214 and IMG 216 and IMG 219) with a minimum grade of C. Clinical: 6.0 credits (360 contact hours).
Components: Clinical
Attributes: Technical

IMG 230(3) Course ID: 004826
Sectional Anatomy for Advanced Medical Imaging
Provides content on computed tomography and magnetic resonance imaging (CT/MRI) procedures including patient care, image acquisition, and cross sectional anatomy. Prerequisite: ((IMG 201 or IMG 216) with a minimum grade of C) or consent of instructor defined by enrollment in an accredited Nuclear Medicine program or enrollment in second year of an accredited Radiography program or ARRT registry or NMTCB registry. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMG 240(3) Course ID: 006617
Pathology for Advanced Medical Imaging Modalities
Examines diseases commonly diagnosable via computed tomography (CT) and/or magnetic resonance imaging (MRI). Traces the disease or trauma process from its description, etiology, symptoms, and diagnosis with appearance on CT and/or MRI scans. Pre-requisite: ((IMG 201 or IMG 216) with a minimum grade of C) or consent of instructor defined by enrollment in an accredited Nuclear Medicine program or enrollment in second year of an accredited Radiography program or ARRT registry or NMTCB registry. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMG 250(3) Course ID: 004827
Computed Tomography Physics & Instrumentation
Explores the physical principles and instrumentation involved in computed tomography (CT). Examines the history and evolution of CT, and the physics of radiation and CT. Includes the study of configuration, collimation, functions, processing, and quality of CT systems operations. Prerequisite: ((IMG 201 or IMG 216) with a minimum grade of C) or consent of instructor defined by enrollment in an accredited Nuclear Medicine program or enrollment in second year of an accredited Radiography program or ARRT registry or NMTCB registry. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMG 255(3) Course ID: 004828
Magnetic Resonance Physics & Instrumentation
Explores the physical principles and instrumentation involved in magnetic resonance imaging (MRI). Examines the history and evolution of MRI and the physics of radiation and MRI. Includes the study of configuration, collimation, functions, processing, and quality of MRI systems operations. Prerequisite: ((IMG 201 or IMG 216) with a minimum grade of C) or consent of instructor defined by enrollment in an accredited Nuclear Medicine program or enrollment in second year of an accredited Radiography program or ARRT registry or NMTCB registry. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMG 260(3) Course ID: 005332
Computed Tomography Imaging Procedures
Examines the procedures, positioning, and equipment involved in computed tomography (CT) imaging. Prerequisite: ((IMG 201 or IMG 216) with a minimum grade of C) or consent of instructor defined by enrollment in an accredited Nuclear Medicine program or enrollment in second year of an accredited Radiography program or ARRT registry or NMTCB registry. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMG 265(3) Course ID: 004829
Magnetic Resonance Imaging Technology
Focuses on patient care and imaging areas of magnetic resonance imaging (MRI) and magnetic resonance angiography (MRA). Explores topics of image formation, tissue characteristics, resolution, imaging options, and parameters, post processing, and patient characteristics. Discusses specific MRI and MRA exams for image body systems. Prerequisite: ((IMG 201 or IMG 216) with a minimum grade of C) or consent of instructor defined by enrollment in an accredited Nuclear Medicine program or enrollment in second year of an accredited Radiography program or ARRT registry or NMTCB registry. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMG 285(4) Course ID: 015558
Computed Tomography Clinical Practice I
Provides a structured clinical experience through sequential competency-based assignments that focuses on the upper and lower extremities, bony and visceral thorax, abdominal and pelvic cavities, and cranium. Provides necessary clinical correlation of data acquisition concepts and basic scanning parameters. Pre-requisite: (IMG 230 and IMG 260) with a minimum grade of C; ARRT certification and completion of Radiography Program. Co-requisite: IMG 240 & IMG 250. Clinical: 4.0 credits (240 contact hours).
Components: Clinical
Attributes: Technical

IMT Industrial Maintenance Technology

IMT 100(3) Course ID: 001578
Welding for Maintenance
Provides basic instruction needed for student to weld using SMAW (Stick), GMAW (MIG), GTAW (TIG), and Oxy-Fuel processes. Corequisite: (IMT 101 or (IMT 1011 - IMT 1014)) or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IMT 101(2) Course ID: 001579
Welding for Maintenance Lab
Provides application of basic welding skills used in SMAW (Stick), GMAW (MIG), GTAW (TIG) and Oxy-Fuel. Corequisite: IMT 100 or consent. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Course Also Offered in Modules, Technical

IMT 110(3) Course ID: 001580
Industrial Maintenance Electrical Principles
Introduces the theory of electricity and magnetism and the relationship of voltage, current, resistance, and power in electrical circuits. Develops an understanding of alternating and direct current fundamentals. Applies formulas to analyze the operation of AC and DC circuits. Corequisite: IMT 111 or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IMT 111(2) Course ID: 001581
Industrial Maintenance Electrical Principles Lab
Verifies knowledge of basic theory by making measurements in working AC and DC circuits. Provides for the construction of various types of circuits and the measurement of their parameters. Stresses the use of test equipment, safety, and troubleshooting. Corequisite: IMT 110 or Consent of Instructor. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Course Also Offered in Modules, Technical

IMT 115(2) Course ID: 001582
Maintenance Machining I
Includes fundamental machining operations necessary for the success of Maintenance Technicians in the field who are required to be proficient in basic machining operations. Corequisite: IMT 116. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IMT 116(5) Course ID: 001583
Maintenance Machining I Lab
Includes the application of fundamental machining operations necessary for the success of Maintenance Technicians in the field who are required to be proficient in basic machining operations. Corequisite: IMT 115 or Consent. Laboratory: 5 credits (150 contact hours).
Components: Laboratory
Attributes: Course Also Offered in Modules, Technical

IMT 120(3) Course ID: 001584
Industrial Maintenance Rotating Machinery
Students will learn the basic principles needed for the proper maintenance of AC and DC motors. Prerequisite: Permission of the instructor.
Components: Lecture
Attributes: Technical

IMT 121(2) Course ID: 001585
Industrial Maintenance Rotating Machinery Lab
Provides practical experience in the construction, operation and maintenance of AC motors and alternators and DC motors and generators. Corequisite: IMT 120 or Consent of Instructor. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

IMT 140(3) Course ID: 005594
Industrial Mechanics
Introduces the fundamental principles of fluid power, mechanical systems, and the relationship between voltage, current, resistance, and power in electrical circuits. Presents a broad range of technical information used in industry today by technicians, mechanics, and maintenance personnel. Corequisite: IMT 141. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMT 141(1) Course ID: 005595
Industrial Mechanics Lab
Provides laboratory experiences for constructing and adjusting basic fluid power circuits, installing and adjusting mechanical drive components, and taking measurements in operational AC and DC electrical circuits. Stresses the use of common hand tools, test instruments, safety, and troubleshooting. Corequisite: IMT 140. Lab: 1 credit (30 contact hours).
Components: Laboratory
Attributes: Technical

IMT 150(3) Course ID: 001588
Maintaining Industrial Equipment I
Introduces the student to maintenance techniques and procedures used to maintain industrial equipment. Corequisite: IMT 151 or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IMT 151(2) Course ID: 001589
Maintaining Industrial Equipment I Lab
Provides the student with lab experience in the maintenance of industrial equipment. Corequisite: IMT 150 or Consent of Instructor. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Course Also Offered in Modules, Technical

IMT 198(1 - 8) Course ID: 001590
Instructor Consent Required
Practicum
Provides supervised on-the-job work experience related to the student's educational objectives. Students participating in the Practicum do not receive compensation. Prerequisite: Permission of Instructor. Practicum: 1-8 credits (75-600 contact hours).
Components: Practicum
Attributes: Technical

IMT 199(1 - 8) Course ID: 001591
Instructor Consent Required
Cooperative Education
Provides supervised on-the-job work experience related to the student's educational objective. Students participating in the Co-op Education program receive compensation for their work. Prerequisite: Permission of Instructor. Co-op: 1 - 8 credits (75-600 contact hours).
Components: Co-Op
Attributes: Technical

IMT 200(4) Course ID: 007372
Industrial Robotics and Robotic Maintenance
Provides the industrial maintenance student an introduction to the theory of robots including applications, basic programming, components, industrial robotic safety standards, industrial robots classifications, key programming techniques, robotic motion concepts, and terminology. Instructs students on the concepts of preventive and predictive maintenance techniques required for a robot and their backup systems and recovery procedures. Provides the opportunity for the industrial maintenance student to develop, set up, and integrate work cells into manufacturing systems at a beginning level. Pre-requisite: IMT 110 and IMT 111 or Consent of Instructor. Lecture/Lab: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

IMT 220(3) Course ID: 001592
Industrial Maintenance Electrical Motor Controls I
Addresses the common symbols used in motor control circuits, the fundamentals of electrical schematics and wiring diagrams, the principles of relays, motor starters, switches, pilot devices, sensing devices, and indicator lights, and introduces the different types and operations of basic motor control circuits. Prerequisite: IMT 110, & IMT 111. Corequisite: IMT 221. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IMT 221(2) Course ID: 001593
Industrial Maintenance Electrical Motor Controls I Lab
Includes an application of common symbols used in motor control circuits, fundamentals of electrical schematics and wiring diagrams, principles of relays, motor starters, switches, pilot devices, sensing devices, indicator lights, and the different types and operations of basic motor control circuits. Prerequisite: (IMT 110 and IMT 111) or consent of instructor. Corequisite: IMT 220. Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory
Attributes: Course Also Offered in Modules, Technical

IMT 222(2) Course ID: 006422
Industrial Maintenance Motor Controls II
Provides advanced study of motor controls in industry. Addresses open and closed loop control systems, servo motors, encoders, AC and DC motors and industry standard color coding. Prerequisite: (IMT 110 and IMT 111 and IMT 220 and IMT 221) or consent of instructor. Corequisite: IMT 223. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IMT 223(2) Course ID: 006437
Industrial Maintenance Motor Controls II Lab
Provides advanced study of motor controls in industry. Addresses open and closed loop control systems, servo motors, encoders, AC and DC motors and industry standard color coding. Prerequisite: (IMT 110 and IMT 111 and IMT 220 and IMT 221) or consent of instructor. Corequisite: IMT 222. Laboratory: 2 credits (60 hours).
Components: Laboratory
Attributes: Course Also Offered in Modules, Technical

IMT 230(5) Course ID: 001594
Industrial Maintenance of PLCs
This course includes the theory of programmable logic controllers to include installation, programming, interfacing, and troubleshooting of industrial PLC's. Prerequisite: IMT 240
Components: Lecture
Attributes: Technical

IMT 231(2) Course ID: 001595
Industrial Maintenance of PLC's Lab
Addresses the diversity of PLC control devices and applications used in industry today. Safety and electrical lockouts are also included. Prerequisite: [(IMT 110 and 111) or IMT 130 and 131) with a grade of "C" or greater] or Consent of Instructor. Corequisite: IMT 230 or Consent of Instructor. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

IMT 240(6) Course ID: 001596
Industrial Maintenance Motor Control Concepts
Addresses the diversity of control devices and applications used in industry today with safety and electrical lockouts included. The basic theory of programmable logic controllers is also included. Prerequisite: [(IMT 110 and IMT 111) or (IMT 130 and IMT 131) with a grade of "C" or greater] or Consent of Instructor. Corequisite: IMT 241 or Consent of Instructor. Lecture: 6 credits (90 contact hours).
Components: Lecture
Attributes: Technical

IMT 250(2) Course ID: 001598
Maintaining Industrial Equipment II
Integrates the student's accumulative knowledge from the IMT 150 and IMT 151 courses. Emphasizes troubleshooting techniques and applied machine repair situations that require the student to apply learned skills from all areas of the curriculum. Prerequisite: (IMT 150 and 151) with a grade of "C" or greater or consent of instructor. Co-requisite: IMT 251 or consent of instructor. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

IMT 251(3) Course ID: 001599
Maintaining Industrial Equipment II Lab
Complements IMT 250 and consists of advanced, specific and assigned machine repair tasks. Prerequisite: (IMT 150 and 151) with a grade of "C" or greater or consent of instructor. Corequisite: IMT 250 or consent of instructor. Laboratory: 3.0 credits (90 contact hours). Lab: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

IMT 260(7) Course ID: 006546
Presswork and Die Maintenance
Includes the fundamental concepts and machining operations needed by the industrial maintenance technician to be proficient in the field of stamping press and die maintenance. Prerequisite: IMT 100 and IMT 101 and [(IMT 115 & IMT 116) or (MTT 114) or (MTT 110 & MTT 112)] or consent of instructor. Lecture: 2 credits (30 contact hours), Lab: 5 credits (150 contact hours).
Components: Lecture
Attributes: Technical

IMT 280(3) Course ID: 001600
Advanced Programmable Logic Controllers
Covers advanced theory programmable logic controllers to include designing applications, programming, interfacing and troubleshooting of industrial PLCs. Prerequisite: ((IMT 220 and IMT221with a grade of "C" or greater) or (equivalent) or Consent of Instructor). Corequisite: IMT 281 or Instructor Consent.
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IMT 281(2) Course ID: 001601
Programmable Logic Controllers Lab
Provides practical applications of the theory in IMT 280 to include installation, programming, interfacing and troubleshooting of industrial PLCs. Prerequisite: [(IMT 220 and 221) with a grade of "C" or greater) or Consent of Instructor. Corequisite: IMT 280 or Consent of Instructor. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Course Also Offered in Modules, Technical

IMT 289(1) Course ID: 007373
Industrial Maintenance Technology Capstone
Serves as the capstone course for the Industrial Maintenance Technology degree program. Integrates prior learning outcomes into a single integrated learning experience. Includes preparation for an exit exam that all program graduates must take. Pre-requisite: ((BRX 120 or ELT 102) and FPX 100 and FPX 101 and IMT 100 and IMT 101 and IMT 110 and IMT 111 and IMT 150 and 151 and IMT 220 and IMT 221) or consent of instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

IMT 290(1 - 3) **Course ID: 001602**
Instructor Consent Required
Special Problems
Provides an opportunity to develop advanced skills in topics related to industrial maintenance. Prerequisite: Consent of Instructor. Laboratory: 1-3 credits (30-90 contact hours).
Components: Laboratory
Attributes: Technical

IMT 1001(0.75) **Course ID: 005915**
Welding for Maintenance Safety
Provides basic instruction needed for student to weld using Oxy-Fuel. Corequisite: IMT 1011 (or consent of instructor). Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

IMT 1002(0.75) **Course ID: 005916**
Welding for Maintenance SMAW (Stick Welding)
Provides basic instruction needed for student to weld using Shielded Metal Arc Welding (SMAW). Corequisite: IMT 1012 (or consent of instructor). Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

IMT 1003(0.75) **Course ID: 005917**
Welding for Maintenance GMAW (MIG Welding)
Provides instruction of setup and use of GMAW (MIG welding) equipment. Corequisite: IMT 1013 (or consent of instructor). Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

IMT 1004(0.75) **Course ID: 005918**
Welding for Maintenance GTAW (TIG Welding)
Provides instruction of setup and use of GTAW (TIG welding) equipment. Corequisite: IMT 1014 (or consent of instructor). Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

IMT 1011(0.5) **Course ID: 005919**
Welding for Maintenance Safety and Cutting Lab
Provides application of welding safety and use of oxy-fuel cutting equipment. Corequisite: IMT 1001 (or consent of instructor). Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 1012(0.5) **Course ID: 005920**
Welding for Maintenance SMAW (Stick Welding) Lab
Provides application of setup and use of SMAW (stick welding) equipment. Corequisite: IMT 1002 (or consent of instructor). Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 1013(0.5) **Course ID: 005921**
Welding for Maintenance GMAW (MIG Welding) Lab
Provides application of setup and use of GMAW (MIG welding) equipment. Corequisite: IMT 1003 (or consent of instructor). Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 1014(0.5) **Course ID: 005922**
Welding for Maintenance GTAW (TIG Welding) Lab
Provides application of setup and use of GTAW (TIG welding) equipment. Corequisite: IMT 1004 (or consent of instructor). Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 1151(0.2) **Course ID: 006406**
General Shop Knowledge
Includes fundamental machining operations necessary for the success of Maintenance Technicians in the field who are required to be proficient in basic machining operations. Corequisite: IMT 1161 or Consent of Instructor. Lecture: 0.2 credit (3 contact hours).
Components: Lecture

IMT 1152(0.1) **Course ID: 006407**
Vertical and Horizontal Bandsaw Operations
Introduces vertical and horizontal bandsaw operations including the selection of feeds and speeds as well as blade welding. Corequisite: IMT 1162 or Consent of Instructor. Lecture: 0.1 credit (1.5 contact hours).
Components: Lecture

IMT 1153(0.3) **Course ID: 006408**
Drill Press Operations and Procedures
Introduces drill press operations including the selection of feeds and speeds, layout, drill bit selection and sharpening, and precision drilling operations. Corequisite: IMT 1163 or Consent of Instructor. Lecture: 0.3 credit (4.5 contact hours).
Components: Lecture

IMT 1154(0.8) **Course ID: 006409**
Lathe Operations and Procedures
Introduces lathe operations including lathe components, grinding tool bits, the selection of feeds and speeds, turning operations, and threading. Prerequisite: IMT 1151 or Consent of Instructor. Corequisite: IMT 1164 or Consent of Instructor. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

IMT 1155(0.6) **Course ID: 006410**
Milling Machine and Surface Grinder Operations and Procedures
Introduces milling and surface grinding operations including vise alignment, tramming, selection of feeds and speeds, form tools, dressing grinding wheels. Prerequisite: IMT 1151 or Consent of Instructor. Corequisite: : IMT 1165 or Consent of Instructor. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

IMT 1161(0.5) **Course ID: 006411**
General Shop Knowledge Lab
Includes the application of fundamental machining operations necessary for the success of Maintenance Technicians in the field who are required to be proficient in basic machining operations. Corequisite: IMT 1151or Consent of Instructor. Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 1162(0.5) **Course ID: 006412**
Vertical and Horizontal Bandsaw Operations Lab
Introduces vertical and horizontal bandsaw operations including the selection of feeds and speeds as well as blade welding. Corequisite: IMT 1152 or Consent of Instructor. Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 1163(0.5) **Course ID: 006413**
Drill Press Operations and Procedures Lab
Introduces drill press operations including the selection of feeds and speeds, layout, drill bit selection and sharpening, and precision drilling operations. Corequisite: IMT 1153 or Consent of Instructor. Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 1164(2) **Course ID: 006414**
Lathe Operations and Procedures Lab
Introduces lathe operations including lathe components, grinding tool bits, the selection of feeds and speeds, turning operations, and threading. Corequisite: IMT 1154 or Consent of Instructor. Laboratory: 2 credits (60 contact hours).
Components: Laboratory

IMT 1165(1.5) **Course ID: 006415**
Milling Machine and Surface Grinder Operations and Procedures Lab
Introduces milling and surface grinding operations including vise alignment, tramming, selection of feeds and speeds, form tools, dressing grinding wheels. Prerequisite: IMT 1161 or Consent of Instructor. Corequisite: IMT 1155 or Consent of Instructor. Laboratory: 1.5 credit (45 contact hours).
Components: Laboratory

IMT 2201(1) **Course ID: 006416**
Introduction to Motor Controls
Addresses the importance of electrical safety and the general fundamentals of motor controls. Prerequisite: (IMT 110 and IMT 111) or Consent of Instructor. Corequisite: IMT 2211. Lecture: 1 credit (15 contact hours).
Components: Lecture

IMT 2202(1) **Course ID: 006417**
Motor Starters and Pilot Devices
15Addresses the diversity of motor starters, control devices, and circuitry. Introduces the different types and operations of basic control circuits while reinforcing the common symbols used in motor control circuits as well as interpreting and drawing electrical schematics and wiring diagrams. Prerequisite: IMT 2201 or Consent of Instructor. Corequisite: IMT 2212. Lecture: 1 credit (15 contact hours).
Components: Lecture

IMT 2203(1) **Course ID: 006418**
Motor Control Circuits
Explores aspects of electrical symbols and specialized motor control circuit. Prerequisite: IMT 2202 or Consent of Instructor. Corequisite: IMT 2213. Lecture: 1 credit (15 contact hours).
Components: Lecture

IMT 2211(0.5) **Course ID: 006419**
Introduction to Motor Controls Lab
Addresses the importance of electrical safety and the general fundamentals of motor controls. Corequisite: IMT 2201. Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory
Attributes: Course Also Offered in Modules

IMT 2212(0.5) **Course ID: 006420**
Motor Starters and Pilot Devices Lab
Addresses the diversity of motor starters, control devices, and circuitry. Prerequisite: IMT 2211 or Consent of Instructor. Corequisite: IMT 2202. Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 2213(1) **Course ID: 006421**
Motor Control Circuits Lab
Explores aspects of electrical symbols and specialized motor control circuits. Prerequisite: IMT 2212 or Consent of Instructor. Corequisite: IMT 2203. Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory

IMT 2221(0.6) **Course ID: 006423**
Principles in Process Control and Automation
Gives and overview of open and closed loop systems and how they relate to servo and motor encoders. Prerequisite: (IMT 110 and IMT 111) or Consent of Instructor. Corequisite: IMT 2231. Lecture: 0.6 credit (9 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

IMT 2222(0.7) **Course ID: 006432**
Industry Standards for Control Circuit Wiring and Troubleshooting Methods
Covers industry standards related to color coding of industrial wiring control cabinets. Provides for troubleshooting techniques using electrical hand tools and developing and interpreting troubleshooting flow charts to determine phase failure and voltage drops. Prerequisite: (IMT 110 and IMT 111) or Consent of Instructor. Corequisite: IMT 2232. Lecture: 0.7 credit (10.5 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

IMT 2223(0.7) **Course ID: 006433**
Industry Standards for Installing Motors and Electronic Variable Speed Drives
Covers how to properly evaluate maintenance procedures used for installation of AC and DC motors, proper start up and shut down of electrical systems and fault recovery. Prerequisites: (IMT 110 and IMT 111) or Consent of Instructor. Corequisite: IMT 2233
Components: Lecture
Attributes: Course Also Offered in Modules

IMT 2231(0.5) **Course ID: 006434**
Principles in Process Control and Automation Lab
Provides the lab component for IMT 2221. Covers open and closed loop systems and how they relate to servo and motor encoders. Prerequisite: (IMT 110 and IMT 111) or Consent of Instructor. Corequisite: IMT 2221. Lecture: 0.5 credits (15 contact hours)
Components: Laboratory

IMT 2232(0.5) **Course ID: 006435**
Industry Standards for Control Circuit Wiring and Troubleshooting Methods Lab
Provides the lab component for IMT 2222. Covers industry standards related to color coding of industrial wiring control cabinets. Provides for troubleshooting techniques using electrical hand tools and developing and interpreting troubleshooting flow charts to determine phase failure and voltage drops. Prerequisite: (IMT 110 and IMT 111) or Consent of Instructor. Corequisite: IMT 2222. Laboratory: 0.5 credits (15 contact hours)
Components: Laboratory

IMT 2233(1) **Course ID: 006436**
Industry Standards for Installing Motors/Electronic Variable Speed Drives II
Provides the lab component for IMT 2223. Covers how to properly evaluate maintenance procedures used for installation of AC and DC motors, proper start up and shut down of electrical systems and fault recovery. Prerequisite: (IMT 110 and IMT 111) or Consent of Instructor. Corequisite: IMT 2223. Laboratory: 1 credit (30 contact hours).
Components: Laboratory

IMT 2601(0.5) **Course ID: 006547**
Stamping Press Basics
Addresses press and production safety, various types of presses, and press operations. Pre-requisite: (IMT 115 & IMT 116) or (MTT 114) or (MTT 110 & MTT 112)] or Consent of Instructor. Lecture: 0.5. (Contact Hours 7.5).
Components: Lecture

IMT 2602(0.5) **Course ID: 006548**
Stamping Die Basics
Addresses the basics of stamping dies including the production of dies, die safety, rigging and setup of dies, die bolting and clamping, and OSHA die identification. Prerequisite: IMT 2601 or Consent of Instructor. Lecture: 0.3 credits (4.5 contact hours), Lab: 0.2 credits (6 contact hours).
Components: Lecture

IMT 2603(1.3) **Course ID: 006550**
Stamping Die Processes
Addresses various stamping die processes such as bending, forming, drawing, squeezing, and coining. Pre-requisite: IMT 2602 or Consent of Instructor. Lecture: 1.3 (Contact Hours 36).
Components: Lecture

IMT 2604(0.6) **Course ID: 006549**
Metallurgy of Die Components
Addresses the characteristics of various tool and die steels, the properties of low carbon steels and cast iron, and die surface coatings and treatments. Prerequisite: IMT 2603 or Consent of Instructor. Lecture: 0.1 credits(1.5 Contact Hours), Lab: 0.5 credits (15 contact hours).
Components: Lecture

IMT 2605(1.2) **Course ID: 006551**
Anatomy of Stamping Dies
Addresses pads and strippers, spring selection, and the characteristics of nitrogen die pressure systems. Prerequisite: IMT 2604 or Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

IMT 2606(1.3) **Course ID: 006552**
Repair Decisions
Addresses the process for die repair decisions, basic considerations needed when repairing dies, and the control of bend by adjusting pad pressure. Pre-requisite: IMT 2605 or Consent of Instructor. Lecture: 1.3. (Contact Hours 34.5).
Components: Lecture

IMT 2607(1.6) **Course ID: 006553**
Die Repair
Addresses the repair of dies including good grinding practice, repairing worn edges, performing shimming of die components, repairing forming ribs and embossments, performing electrical and welding repairs, performing hand finishing, and explaining the repair of nitrogen pressure systems. Prerequisite: IMT 2606 or Consent of Instructor. Lecture: 0.1 credits (1.5 contact hours), Lab: 1.5 credits (45 contact hours).
Components: Lecture

IMT 2801(0.75) **Course ID: 006424**
Introduction to Programmable Logic Controllers
Provides an overview of Programmable Controllers, their hardware and functions. Prerequisite: ((IMT 220 and IMT221with a grade of "C" or greater) or (equivalent) or Consent of Instructor). Corequisite: IMT 2811 or Instructor Consent. Lecture: 0.75 credit. (11.25 contact hours).
Components: Lecture

IMT 2802(0.75) **Course ID: 006425**
Programming Instructions in PLCs
Provides an overview in programming Programmable Logic Controller Timers and Counters. Corequisite: IMT 2812 or Instructor Consent. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

IMT 2803(0.75) **Course ID: 006426**
Number Systems and Data Manipulation in PLCs
Includes different numbering systems, their transfer from one location to another, comparing, manipulation and common math instructions used in PLC. Corequisite: IMT 2813 or Instructor Consent. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

IMT 2804(0.75) **Course ID: 006427**
Advanced Instructions and Troubleshooting PLCs
Provides an understanding of control instructions, sequencers, shift registers, troubleshooting, and forcing inputs and outputs. Corequisite: IMT 2814 or Instructor Consent. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

IMT 2811(0.5) **Course ID: 006428**
Introduction to Programmable Logic Controllers Lab
Provides hands-on experience in programming and addressing basic instructions, internal relays, and latching relays. Includes changing modes of operation. Prerequisite: ((IMT 220 and IMT221with a grade of "C" or greater) or (equivalent) or Consent of Instructor). Corequisite: IMT 2801 or Instructor Consent. Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 2812(0.5) **Course ID: 006429**
Programming Instructions in PLCs Lab
Provides practical experience in programming Programmable Logic Controller Timers and Counters. Corequisite: IMT 2802 or Instructor Consent. Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 2813(0.5) **Course ID: 006430**
Number Systems and Data Manipulation in PLCs Lab
Convert numbers systems, perform data manipulation, transfer, and comparison on the numbers as well as program math instructions. Corequisite: IMT 2803 or Instructor Consent. Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 2814(0.5) **Course ID: 006431**
Advanced Instructions and Troubleshooting PLCs Lab
Covers program control instructions, sequencers, and shift registers. Includes troubleshooting PLC issues and using the forcing command. Corequisite: IMT 2804 or Instructor Consent. Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

INF Informatics

INF 120(3) **Course ID: 007282**
Elementary Programming
An elementary introduction to programming for those with no previous programming experience. Emphasis on understanding how to read and write basic procedural programs, and on understanding the concepts of algorithm and execution. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science, University Course (Northern Kentucky University)

INF 128(3) **Course ID: 007283**
Principles of Informatics
Multi-disciplinary exploration of the nature of information; how it is represented, processed, shared, preserved, and protected. Topics drawn from the fields of computing, communication, business, the natural and social sciences, and the humanities. Identifies enduring principles; examines impacts on individuals and society; provides practice with a variety of digital technologies. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: University Course (Northern Kentucky University)

INF 260(3) **Course ID: 007284**
Object Oriented Programming I
Elementary object-oriented programming concepts and practice: types, decisions, loops, methods, arrays, classes; design and problem-solving. An intensive introduction intended for students with programming experience. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: University Course (Northern Kentucky University)

INF 260L(1) **Course ID: 007285**
Object Oriented Programming Laboratory
Laboratory to accompany INF 260 in which students gain hands-on experience in programming and using programming tools such as debuggers. Lab: 1.0 credit (2.0 contact hours).
Components: Laboratory
Attributes: University Course (Northern Kentucky University)

INF 282(3) **Course ID: 007286**
Introduction to Databases
Core concepts for the design, creation, and manipulation of relational databases. Analysis of data requirements, conceptual modeling, definition of the relational model, relational database design and normalization, and database implementation; manipulation of relational databases using relational algebra with SQL. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: University Course (Northern Kentucky University)

INF 286(3) **Course ID: 007287**
Introduction to Web Development
An introduction to web design and development for majors in the informatics fields. Web page creation and HTML; site organization and best practices; e-business planning, models and strategies; overview of SML and CSS; introduction to client-side and server-side programming. Lecture 3.0 credits (45 contact hours).
Components: Lecture
Attributes: University Course (Northern Kentucky University)

INF Interior Finishing

INF 125(2) **Course ID: 001607**
Introduction to Drywall
This course includes cutting and hanging drywall. The manufacturing processes are covered along with product options for special applications. Installation of metal studs in fabrication of walls is included also.
Components: Laboratory
Attributes: Technical

INS Insurance

INS 100(3) **Course ID: 006586**
Introduction to Insurance and Risk Management
Introduces property-casualty insurance and is a foundation for the study of insurance. Provides information on types of insurance, providers, regulatory environment, and performance measures. Describes the function of marketing, underwriting and claims. Covers insurance as a contract, introduces both property and liability loss exposure and policy provisions, and provides a basic discussion of risk management as a means of managing loss exposures. Pre-requisite: Reading, English, and Mathematics assessment scores above the KCTCS developmental placement level or successful completion of the prescribed developmental course(s). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

INS 181(3) **Course ID: 006587**
Foundations of Insurance Production
Introduces principles of insurance production and agency and sales management. Emphasizes insurance products and insurance markets in the context of personal lines coverages as well as limited commercial lines coverages. Pre-requisite: Reading and English assessment scores above the KCTCS developmental placement level or successful completion of the prescribed developmental course(s). INS 100 or consent. MT 150 or above. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

INS 182(3) **Course ID: 006588**
Multiple Lines Insurance Production
Introduces principles of multiple lines insurance production. Emphasizes insurance product and insurance markets in the context of commercial lines coverages. Pre-requisite: INS 181. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

INS 183(3) **Course ID: 006589**
Agency Operations and Sales Management
Focuses on the producer's office environment and sales management techniques. Emphasizes how management concepts can be applied to the producer's sales and to the business of running an agency. Pre-requisite: INS 182. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IRW Integrated Reading and Writing

IRW 85(4) **Course ID: 015875**
Integrated Reading and Writing I
Emphasizes proficiency in reading comprehension, vocabulary, and critical thinking skills to prepare students for college reading through individualized and/or group instruction and practice. Applies writing as a process with emphasis on paragraph-length assignments, basic conventions of standard English as these apply to students' own work, writing in response to reading, and the use of technology to produce and share writing. Pre-requisite: COMPASS score in writing: 30-38 and COMPASS score in reading: 55-69 OR Consent of Instructor. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Reading/English

IRW 95(4) **Course ID: 007214**
Integrated Reading and Writing
Emphasizes critical reading skills to develop vocabulary techniques, active reading strategies, comprehension accuracy, and interpretation of visual elements in texts. Applies writing as a process with instruction in intermediate writing skills and technology emphasizing organization, idea development through critical thinking, and editorial improvements through multi-paragraph writing. Introduces basic research and documentation through writing in response to reading. Pre-requisite: COMPASS score in writing: 50-73 and COMPASS score in reading 77-82. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Reading/English

ISM Instrumentation and Process

ISM 102(4) **Course ID: 003972**
Fundamentals of Instrumentation
Introduces concepts of instrumentation devices and laboratory techniques used for monitoring and controlling manufacturing processes. Includes component identification and application, basic conversions, accuracy of measuring devices, tubing use and selection, repair procedures and the theory of operation and calibration of pressure, and process measuring instruments. Covers the need for calibration and the use of various calibration standards. Includes safety precautions, and regulations encountered in the instrumentation field. Lecture: 3 credits (45 contact hours). Lab: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ISM 210(4) **Course ID: 003976**
Fundamentals of Process Control
Provides theoretical and practical experience in the operation of process control systems. Lecture: 3 credits (45 contact hours). Lab: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ISX Industrial Safety

ISX 100(3) **Course ID: 001622**
Industrial Safety
This course provides practical training in industrial safety. The students are taught to observe general safety rules and regulations, to apply work site and shop safety rules, and to apply OSHA regulations. Students are expected to obtain certification in first aid and cardiopulmonary resuscitation.
Components: Lecture
Attributes: Technical

ISX 101(3) **Course ID: 000877**
Introduction to Industrial Safety
Introduces the history of the industrial safety movement along with current standards under the Occupational Safety and Health Act (OSHA). Introduces safety engineering methods. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ISX 105(2) **Course ID: 015675**
General Industrial Safety
Introduces the history of the safety movement under the standards of the Occupational Safety and Health Administration (OSHA). Provides entry level workers with information about their rights and employer responsibilities. Emphasizes hazard identification, avoidance, control and prevention. OSHA certificate may be available upon successful completion of all required course topics. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

ISX 1001(1) **Course ID: 016784**
Safety & Universal Precaution
This course provides practical training in industrial safety. The students are taught to observe general safety rules and regulations, to apply work site and shop safety rules, and to apply OSHA regulations. Lecture: 1.0 credits (15 contact hours)
Components: Lecture

ISX 1002(1) **Course ID: 016785**
Fire Prevention &Hazardous Com
This course provides practical training in industrial safety. The students are taught to observe general safety rules and regulations, to apply work site and shop safety rules, and to apply OSHA regulations specifically related to fire prevention and hazardous communication procedures. Lecture: 1.0 credits (15 contact hours)
Components: Lecture

ISX 1003(1) **Course ID: 016786**
CPR & First Aid
This course provides practical training in industrial safety. Students are expected to obtain certification in first aid and cardiopulmonary resuscitation. Lecture: 1.0 credits (15 contact hours)
Components: Lecture

ISX 1051(0.67) **Course ID: 015673**
10-hour General Industry
Provides entry level workers with information about their rights and employer responsibilities. Emphasizes hazard identification, avoidance, control and prevention. Lecture: .67 credits (10 contact hours).
Components: Lecture

ISX 1052(1.33) **Course ID: 015674**
General Industry Topics
Introduces the history of the safety movement under the standards of the Occupational Safety and Health Administration (OSHA). Emphasizes hazard identification, avoidance, control and prevention. (Covers selected topics and standards for general industry under OSHA.) OSHA certificate may be available upon successful completion of all required course topics (and must be within six months of completing ISX 1051). Pre-requisite OR Co-requisite: ISX 1051. Lecture: 1.33 credits (20 contact hours).
Components: Lecture

ITE Team Dynamics and Problem Solving

ITE 233(3) **Course ID: 004618**
Statistical Process Control
Introduces students to the principles and methods used for controlling the quality of goods produced. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ITE 250(3) **Course ID: 004619**
Team Dynamics and Problem Solving
Emphasizes the use of a systematic problem-solving model while building skills for team members and leaders. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ITP Interpreter Training Program

ITP 115(3) **Course ID: 005590**
Heritage and Culture of Deaf People
Overview of the psychological, sociological and cultural impacts of deafness upon children and adults. Explores how deafness can affect the individual's development in language, communication, cognition and psychological-emotional growth. Examines historic relations between deaf and hearing, and compares deaf culture with that of the hearing world. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: University Course (Eastern Kentucky University)

ITP 210(3) **Course ID: 005757**
Application of Fingerspelling and Numbering Systems
This course will focus on aspects of receptive and expressive fingersepelling usage, including lexicalized fingerspelling and various numbering systems within ASL. Prerequisite: ASL 201 with a minimum of "C" or permission of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IVC Invasive Cardiology

IVC 140(16) **Course ID: 006576**
Invasive Cardiology I
Examines the anatomy and physiology of the cardiovascular system and the diseases found within the system. Introduces the student to radiological procedures and protocols used in the cardiac catheterization lab and instruction in advanced cardiac life support (ACLS). Introduces correct techniques used by Invasive Cardiology Technologists during specific procedures performed in the cardiac catheterization lab. Discusses the hemodynamics, pharmacology and calculations encountered in the cardiac catheterization lab. Pre-requisite DMS 105. Lecture: 16.0 credits (240 contact hours).
Components: Lecture
Attributes: Technical

IVC 150(3) **Course ID: 006577**
Invasive Cardiology II
Addresses radiology principles, scrub and circulating principles and devices used to obtain optimal outcomes in the cardiac catheterization lab. Introduces procedures, such as MRI and CT, used outside of the cardiac catheterization lab for evaluation of the cardiovascular system. Discusses the monitor and electrophysiology principles, ventricular assist devices, coronary artery bypass grafts and cardiac transplantation procedures performed in the cardiac catheterization lab. Emphasizes the preparation, protocol and interventional procedures for a pediatric catheterization lab. Pre-requisite: DMS 105. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IVC 165(6) **Course ID: 006579**
Invasive Cardiology Clinical Education II
Applies invasive cardiology instruction to the cardiac catheterization laboratory clinical setting. Participation in the responsibilities of the invasive cardiovascular technologist, with emphasis on scrub and circulate duties. Introduces electrophysiology laboratory procedures. Pre-requisite: IVC 160. Clinical: 6.0 credits (360 contact hours).
Components: Clinical
Attributes: Technical

JAT Journalism - Advertising - Telecommunications

JAT 101(3) **Course ID: 002222**
Introduction to Communication Media
Lectures, readings, and other materials provide an introductory survey of the journalism, advertising , and telecommunications professions. This course will foster an understanding of the historical development, theory, effects, regulation, practice, and professional opportunities of these three industries. Students will gain an awareness of the possibilities and limitations of evolving communication technologies, preparing them to become intelligent consumers, producers, and managers of communication media. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: Other

JAT 241(1 - 4) **Course ID: 002223**
Communications Practicum
Supervised laboratory work in the media of mass communications, with meetings for evaluation of work, study of techniques, analyses of problems, and reports. May be repeated to a maximum of four credits. (Offered in Community College System only.) Independent Study 1.0 - 4.0 credit (15 contact hours)
Components: Independent Study
Attributes: Other

JPN Japanese

JPN 101(4) **Course ID: 003862**
Beginning Japanese I
A course in first semester Japanese language. Lecture: 4 credits (60 contact hours)
Components: Lecture
Attributes: Foreign Language, Cultural Studies

JPN 102(4) **Course ID: 003970**
Beginning Japanese II
A course in second semester Japanese language. Prerequisite: JPN 101 or equivalent. Lecture: 4 credits (60 contact hours)
Components: Lecture
Attributes: Foreign Language, Cultural Studies

JPN 201(3) **Course ID: 003994**
Intermediate Japanese I
Focuses on developing listening, speaking, reading and writing skills in early intermediate level of Japanese. Prerequisite: JPN 102/RAE 121 or equivalent. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: Other

JPN 202(3) **Course ID: 004208**
Intermediate Japanese II
Focuses on developing listening, speaking, reading and writing skills in upper intermediate level of Japanese. Prerequisite: JPN 201. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Other

KHP Kinesiology and Health Promotion

KHP 100(1) **Course ID: 002299**
Walking
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)
Components: Laboratory
Attributes: Other

KHP 101(1) **Course ID: 002300**
Weightlifting
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)
Components: Laboratory
Attributes: Other

KHP 104(1) **Course ID: 002304**
Beginning Swimming
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)
Components: Laboratory
Attributes: Other

KHP 106(1) **Course ID: 002306**
Beginning Bowling
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)
Components: Laboratory

KHP 107(1) **Course ID: 002307**
Fitness
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)
Components: Laboratory
Attributes: Other

KHP 109(1) **Course ID: 002309**
Dancing
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)
Components: Laboratory
Attributes: Other

KHP 115(1) **Course ID: 002315**
Martial Arts
Provides students with beginning instruction and experience in self-defense, basic exercise, and disciplines associated with martial arts.. Lab: 1 credit (30 contact hours)
Components: Laboratory
Attributes: Other

KHP 116(1) **Course ID: 002316**
Intermediate Martial Arts
Provides students with intermediate instruction and experience in basic exercise and disciplines associated with martial arts. Pre-requisite: KHP 115. Lab: 1 credit (30 contact hours)
Components: Laboratory
Attributes: Other

KHP 121(1) **Course ID: 002321**
Aerobics
Includes beginning conditioning activities and/or vigorous nonstop rhythmic movement patterns designed to improve or maintain cardiovascular endurance for students at all levels of fitness. Lab: 1 credit (30 contact hours)
Components: Laboratory
Attributes: Other

KHP 122(1) **Course ID: 002322**
Low-Impact Aerobics
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)
Components: Laboratory
Attributes: Other

KHP 123(1) **Course ID: 002323**
Basketball
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit.
Components: Laboratory
Attributes: Other

KHP 124(1) **Course ID: 002324**
Conditioning
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)
Components: Laboratory
Attributes: Other

KHP 129(1) **Course ID: 002329**
Beginning Weight Training
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)
Components: Laboratory
Attributes: Other

KHP 130(1) **Course ID: 002330**
Water Aerobics
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)
Components: Laboratory
Attributes: Other

KHP 132(1) **Course ID: 002332**
Nautilus
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)
Components: Laboratory
Attributes: Other

KHP 134(1) **Course ID: 002334**
Cross-training
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab 1 credit (15 contact hours)
Components: Laboratory
Attributes: Other

KHP 135(1) **Course ID: 002335**
Swimming for Fitness
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours)
Components: Laboratory
Attributes: Other

KHP 136(1) **Course ID: 002336**
Advanced Walking for Fitness
Instruction in a variety of motor skills activities. Courses are for students who already possess intermediate skills in the activity. Instructors will assess skill at start of course. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Assignment of specific title will occur internally in the department. Laboratory: 3 hours. Prerequisite: Completion of comparable service course or demonstrated competency.
Components: Laboratory
Attributes: Other

KHP 138(1) **Course ID: 003855**
Beginning Yoga
Provides students with instruction and activities associated with beginning yoga. Lab: 1 credit (30 contact hours)
Components: Laboratory
Attributes: Other

KHP 139(1) **Course ID: 003856**
Lifetime Sports
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit.
Components: Laboratory
Attributes: Technical

KHP 140(1) **Course ID: 002341**
Advanced Weight Training
Instruction in a variety of motor skills activities. Courses are for students who already possess intermediate skills in the activity. Instructors will assess skill at start of course. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Assignment of specific title will occur internally in the department. Laboratory: 3 hours. Prereq: Completion of comparable service course or demonstrated competency
Components: Laboratory
Attributes: Other

KHP 142(1) **Course ID: 002342**
Advanced Aerobics
Instruction in a variety of motor skills activities. Courses are for students who already possess intermediate skills in the activity. Instructors will assess skill at start of course. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Assignment of specific title will occur internally in the department. Laboratory: 3 hours. Prerequisite: Completion of comparable service course or demonstrated competency
Components: Laboratory
Attributes: Other

KHP 143(1) **Course ID: 002343**
Intramurals
Instruction in a variety of motor skills activities. Courses are for students who already possess intermediate skills in the activity. Instructors will assess skill at start of course. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Assignment of specific title will occur internally in the department. Laboratory: 3 hours. Prerequisite: Completion of comparable service course or demonstrated competency
Components: Laboratory
Attributes: Other

KHP 145(3) **Course ID: 003870**
Concepts of Health and Fitness
Current concepts of health and fitness covering such topics as the benefits of physical fitness, principles of fitness training, prevention of cardiovascular disease, and basic concepts of nutrition and weight management. Emphasis will be on the promotion of health lifestyles. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: Other

KHP 146(1) **Course ID: 016371**
Intermediate Yoga
Provides students with intermediate instruction and activities associated with yoga. Laboratory: 1 credit (30 contact hours).
Components: Laboratory
Attributes: Other

KHP 149(1) **Course ID: 016372**
Advanced Yoga
Provides students with advanced instruction and activities associated with yoga. Laboratory: 1 credit (30 contact hours). Pre-requisite or Co-requisite: KHP 146.
Components: Laboratory
Attributes: Other

KHP 150(3) **Course ID: 006816**
Personal Health Behavior
Prepares students to make informed choices about health issues and behaviors and to take responsibility for their health and well-being. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

KHP 160(3) **Course ID: 006817**
Personal Nutrition and Fitness
Introduces the importance of daily diet and nutrition. Addresses the role of the personal trainer in helping clients to recognize and decrease risks for chronic diseases. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

KHP 190(2) **Course ID: 000029**
First Aid and Emergency Care
A study of first aid subject matter and orientation in the various first aid teaching methods. Lectures and demonstrations on first aid measures with skill training. American Red Cross Certificate made available. Lecture: 1 hour; Laboratory: 2 hours.
Components: Laboratory, Lecture
Attributes: Other

KHP 225(3) **Course ID: 006818**
Exercise Techniques and Physical Training
Focuses on the core components of personal training. Provides information and resources necessary to pass personal fitness trainer certification. Pre-requisite: BIO 135 or MSG 100. Co-requisite: KHP 235. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

KHP 230(3) **Course ID: 000379**
Human Health and Wellness
The study of health promotion, wellness, and disease prevention concepts as applied to individual, familial, and community health.
Components: Lecture
Attributes: Other

KHP 235(2) **Course ID: 006820**
Personal Trainer Practicum
Students will apply personal training principles and techniques and demonstrate skills with clients in various settings under instructor and preceptor supervision. Pre-requisite: BIO 135 or MSG 100. Co-requisite: KHP 225. Practicum: 2.0 credits (60 contact hours).
Components: Practicum
Attributes: Other

KHP 240(3) **Course ID: 002226**
Nutrition and Physical Fitness
Focuses on the inter-relationship between nutrition and physical fitness. Provides the student with the information necessary to formulate an individualized plan for achievement and maintenance of adequate nutrition and physical fitness while addressing weight control. Lecture: 3 credits (45 contact hours).
Components: Laboratory, Lecture
Attributes: Other

KMA Kentucky Medication Aide

KMA 100(5) **Course ID: 001629**
Kentucky Medication Aide
Prepares a Kentucky Medicaid Nurse Aide to administer specific medications in a long term care facility as delegated and supervised by a licensed nurse. Prerequisite: [(MNA 100 or NAA 100 or NAA 125) and six months of work experience as a Kentucky Medicaid Nurse Aide] or Consent. Lecture/Lab: 5 credits (105 contact hours).
Components: Lecture
Attributes: Technical

LAS Latin America

LAS 201(3) **Course ID: 015525**
Introduction to Latin America
An interdisciplinary approach to the people, culture, and development of the Latin American republics. Attention will be concentrated on significant aspects of the indigenous peoples, geography, economic processes, gender roles, social structures and politics of Latin America, with special attention paid to value structures and value conflicts. Musical, literary and artistic expression in Latin America will also be introduced. Lecture: 3.0 credits (45 contact hours)
Components: Lecture
Attributes: AH - Arts and Humanities, University Course (University of Kentucky)

LEAD Leadership Studies

LEAD 200(3) **Course ID: 006761**
Introduction to Leadership Studies
The purpose of the course is to provide students a better understanding of leadership from multiple angles and perspectives. Students will explore the different ways leadership has been defined and studied. Students enrolled in this course will read leadership theory, discuss leadership concepts, and discuss cases portraying leaders who exemplify or challenge these theories. Additionally, students will explore the relevance of leadership theory and concepts to the work that will perform as future leaders in their careers and communities. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: University Course (Western Kentucky University)

LIN Library Informatics

LIN 175(3) **Course ID: 015987**
Information Literacy
A foundational course that introduces students to the cross-disciplinary skills needed to assess information needs, and access and evaluate information sources. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, University Course (Northern Kentucky University)

LIT Library Information Technology

LIT 115(3) **Course ID: 004801**
Introduction to Reference Services
Introduces library reference sources and services. Includes reference interview techniques, print and digital information sources, bibliographic and full text databases, and digital access and retrieval skills. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

LIT 120(3) **Course ID: 007416**
Readers' Advisory Services
Examines library readers' advisory services. Includes readers' advisory resources, library programming, book discussion groups, collection development, formats for books, ebooks and audio books, online applications, and marketing. Pre-requisite: LIT 115 or permission of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

LIT 124(3) **Course ID: 004802**
Library Administration
Introduces basic principles of library organization and management. Includes the planning process, policies, ethical and legal issues, budgeting, and human resources. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

LIT 132(3) **Course ID: 004803**
Library Technical Services
Provides an overview of library technical services, including acquisitions, processing, cataloging and classification. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

LIT 200(3) **Course ID: 005218**
Seminar in Kentucky Literature
This is an online or computer-assisted seminar course in Kentucky literature recognizing, examining, and studying distinct regional differences and similarities with concentration on major contemporary and traditional Kentucky writers and their texts. Topics will vary, from a group of authors, and historical period or aesthetic movement, to a genre, a theme, or an aspect of literary theory. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: HUM 245
Attributes: Technical

LIT 230(3) **Course ID: 004804**
Web Publishing for Libraries
This is a course in web publishing for library web sites, including HTML code, web page authoring software, web page and web site design, and trends in library web sites. This is a distance education course with a service learning component. Prerequisite: LIT 115 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

LIT 240(3) **Course ID: 004805**
Literature of Appalachian Kentucky
This is an online or computer-assisted introductory survey course in the Appalachian literature of Kentucky concentrating on the major contemporary and traditional writers who are distinctly identified with that region. Approaches may include a group of authors, an historical period or aesthetic movement, a genre, a theme, or an aspect of literary theory. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

LIT 242(3) **Course ID: 004806**
Literature of Western Kentucky
This is an online or computer-assisted introductory survey course in the literature of Western Kentucky which concentrating on the major contemporary and traditional writers who are distinctly identified with that region. Approaches may include a group of authors, an historical period, or aesthetic movement, a genre, a theme or an aspect of literary theory. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

LIT 243(3) **Course ID: 004807**
Library Services for Children
Introduces library services for children grades K - 6 and their caregivers. Includes surveys of child development, library programming, children's literature, collection development, and legal issues. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

LIT 245(3) **Course ID: 005083**
Library Services for Young Adults
Introduces library services for young adults from 6th to 12th grades. Includes programming, collection development, young adult literature, the use of the Internet, and ethical and legal issues. Emphasizes the development and promotion of young adult library services. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

LIT 247(3) **Course ID: 004808**
Library Services for Adults
Introduces library services for adults. Includes adult literature, collection development, programming, circulation services, reference services, and customer relations. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

LIT 248(3) **Course ID: 004809**
Library Services for Preschool Children
Introduces library services for preschool children, age infant to 5 years. Includes library programming development and production, preschool children's literature, services for parents and for child care services, collection development, and legal issues. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

LIT 280(3) **Course ID: 004810**
Genealogy Services in Libraries
Introduces genealogy services in libraries. Surveys genealogy data sources, research methods, collection development, patron referrals, legal and ethical issues, library programming, and marketing. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

LIT 285(3) **Course ID: 005051**
History of Libraries
This course is a survey of the development of libraries from ancient times to the present, with emphasis on academic and public libraries in the United States. Attention is given to the interaction of libraries with economic, social and political trends in the larger society. Prerequisite: LIT 115 or consent of instructor. Lecture: 3 credit (45 contact hours).
Components: Lecture

LIT 299(1 - 3) **Course ID: 004811**
Selected Topics in Library Information Technology
Expands library course offerings as new technologies develop and/or as new issues evolve. Lecture: 1.0 - 3.0 credits (15-45 contact hours).
Components: Lecture
Attributes: Technical

LOM Logistics and Operations Management

LOM 100(3) **Course ID: 006827**
Introduction to Logistics Management
Presents an overview of general logistics concepts and organizational issues; inventory management and customer service in logistics; and transportation and third party logistics. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

LOM 101(3) **Course ID: 006828**
Transportation Management
Presents an overview of the role of transportation and pricing issues; transportation modes and terminals; and transportation risk management and global management issues. Pre-requisite: LOM 100. Lecture: 3.0 credits (45 contact hours)
Components: Lecture
Attributes: Technical

LOM 102(3) **Course ID: 006829**
Supply Chain Management
Presents an overview of supply chain management and financial analysis; inventory management skills and techniques; and supply chain design and sustainability solutions. Pre-requisite: LOM 100. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

LOM 180(3) **Course ID: 004629**
Project Management
Introduces practical approach to managing essential resources, people, and deadlines, and real-world challenges required to bring any project in on time, on target, and on budget. Covers skills and concepts of essential project management processes, defining requirements, schedules, risk management assessment, change control, and project management software applications. Provides students with a practical approach to developing projects with opportunities to apply skills and elements by completing activities based upon real-time projects and case studies. Prerequisite: Digital literacy or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

LOM 202(3) **Course ID: 006830**
Applied Supply Chain Management
Provides an understanding of the importance of individual components (supplies, manufacturers, distributors, and customers) in the operation of a supply chain. Pre-requisite: LOM 102. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

LOM 210(3) **Course ID: 016149**
Lean for Logistics
Introduces students to the principles and practices of lean operations in relation to the field of logistics. Incorporates a lean simulation activity and examples from lean practitioners in the management of supply chain operations. Discusses core lean principles with an emphasis on work cells and Just In Time (JIT) practices. Pre-requisite or Co-requisite: LOM100 Introduction to Logistics Management. Lecture: 3.0 credits (45 contact hours)/
Components: Lecture
Attributes: Technical

LOM 1004(2) **Course ID: 016726**
Logistics Concepts
Presents an overview of general logistics concepts and organizational issues, inventory management, and customer service in logistics. Lecture: 2.0 credits (30 contact hours).
Components: Lecture

LOM 1005(1) **Course ID: 016727**
Logistics of Transportation
Presents an overview of transportation and third party logistics. Pre-requisite: LOM 1004. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

LOM 1011(1) **Course ID: 015579**
Transportation Overview
Presents an overview of the role of transportation and pricing issues. Pre-requisite:LOM 100. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

LOM 1012(1) **Course ID: 015574**
Transportation Modes
Presents transportation modes and terminals. Pre-requisite: LOM 1011. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

LOM 1013(1) **Course ID: 015575**
Global Transport
Presents an overview of transportation risk management and global management issues. Pre-requisite: LOM 1012. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

LOM 1021(1) **Course ID: 015576**
Supply Chain Overview
Presents an overview of supply chain management and financial analysis. Pre-requisite: LOM 100. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

LOM 1022(1) **Course ID: 015577**
Supply Chain Skills
Presents inventory management skills and techniques. Pre-requisite: LOM 1021. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

LOM 1023(1) **Course ID: 015578**
Supply Chain Sustainability
Presents supply chain design and sustainability solutions. Pre-requisite: LOM 1022. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

LOM 1801(1) **Course ID: 016373**
Project Management Overview
Introduces practical approach to managing essential resources, people, and deadlines, and real-world challenges required to bring any project in on time, on target, and on budget. Pre-requisite: Digital Literacy or consent of instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

LOM 1802(1) **Course ID: 016374**
Project Management Activities
Covers skills and concepts of essential project management processes, defining requirements, schedules, risk management assessment, change control, and project management software applications. Pre-requisite: LOM 1801. Lecture: 1 credit (15 contact hours).
Components: Lecture

LOM 1803(1) **Course ID: 016375**
Using Microsoft Project
Provides students with a practical approach to developing projects with opportunities to apply skills and elements by completing activities based upon real-time projects and case studies. Pre-requisite: LOM 1802. Lecture: 1 credit (15 contact hours)
Components: Lecture

LOM 2021(1) **Course ID: 016376**
Intro to Supply Chain Mgmt
Explains the key drivers in a supply chain and their relationship to manufacturers and distributors and the benefits of integration with those departments. Pre-requisite: LOM 102. Lecture: 1 credit (15 contact hours).
Components: Lecture

LOM 2022(1) **Course ID: 016377**
Benefits of Supply Chain Mgmt
Demonstrates the benefits of supply chain management in achieving supply cost reductions utilizing charts and flow plans to integrate into the workplace. Pre-requisite: LOM 2021. Lecture: 1 credit (15 contact hours).
Components: Lecture

LOM 2023(1) **Course ID: 016378**
Utilizing Supply Chain Mgmt
Analyze and develop customer focused supply chain utilizing effective strategies. Pre-requisite: LOM 2022. Lecture: 1 credit (15 contact hours).
Components: Lecture

LSI Lockmasters Security Institute

LSI 120(4) **Course ID: 004403**
Comprehensive Security Specialist
Training for the security professional in all aspects of security, addressing current trends in policies and procedures, including physical security, crime prevention, security surveys and contingency planning for internal and external threats. Prerequisite: Students will be required to undergo a criminal background investigation. If a student is presently employed by a law enforcement or federal agency that requires criminal checks, this requirement may be waived by LSI. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

LSI 130(4) **Course ID: 004404**
GSA: Locks, Vaults & Containers Certified Technician Training
Instruction to successfully service, maintain, perform covert and forced entry, and repair GSA approved security containers. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (30 contact hours). Prerequisite: Instruction to successfully service, maintain, perform covert and forced entry, and repair GSA approved security containers.
Components: Laboratory, Lecture
Attributes: Technical

LSI 140(1) **Course ID: 004406**
Managing Terrorism and Other Crises
An overview of domestic and international terrorist groups, introducing the concept of contingency planning in comparison to other types of operations planning, and providing basic knowledge regarding the management of a bomb threat and identification of explosives and incendiary devices. Prerequisite: Students will be required to undergo a criminal background investigation. If a student is presently employed by a law enforcement or federal agency that requires criminal checks, this requirement may be waived by LSI. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical

LSI 150(4) **Course ID: 004407**
Professional Locksmithing
Comprehensive hands-on knowledge of locks, providing the student with the information necessary to become a competent technician who can service, maintain, troubleshoot and master key any industrial key lock system. Prerequisite: Students will be required to undergo a criminal background investigation. If a student is presently employed by a law enforcement or federal agency that requires criminal checks, this requirement may be waived by LSI. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

LSI 151(1) **Course ID: 004659**
Basic Penetration of Safes
Techniques and skills that are required to strategically drill into a container and defeat the locking mechanism in order to penetrate a safe or security container. Prerequisite: LSI 153. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical

LSI 152(1) **Course ID: 004660**
Combination Lock Manipulation
Complex and in-depth investigation of the working of the combination lock that will provide the technician with the capability of determining the combination without drilling the lock. Prerequisite: LSI 153. Lecture: 0.5 credits (8 contact hours). Laboratory: 0.5 credits (15 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

LSI 153(2) **Course ID: 004661**
Safe Lock Servicing - Mechanical and Electronic
Instruction in the operation and servicing of mechanical and electronic safe locks. Prerequisite: Students will be required to undergo a criminal background investigation. If a student is presently employed by a law enforcement or federal agency that requires criminal checks, this requirement may be waived by LSI. Lecture: 1 credit (15 contact hours). Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

LSI 160(2) **Course ID: 004408**
Fundamentals of Electricity
Instruction in basic electrical principles, circuit design and application, and electrical components needed to comprehend the principles of electronic security systems. Prerequisite: Students will be required to undergo a criminal background investigation. If a student is presently employed by a law enforcement or federal agency that requires criminal checks, this requirement may be waived by LSI. Lecture: 1 credit (15 contact hours). Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

LSI 170(2) **Course ID: 004409**
Electronic Access Control
Instruction in the latest security technology utilizing electronic access control systems, enabling the technician to design, install, and troubleshoot the latest electronic access control systems. Prerequisite: LSI 160. Lecture: 1 credit (15 contact hours). Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MA Mathematics

MA 108R(3) **Course ID: 006621**
Intermediate Algebra
This course is remedial in nature and covers material commonly found in second year high school algebra. Specific topics to be discussed include numbers, fractions, algebraic expression, simplifying, factoring, laws of exponents, linear equations, simple graphs and polynomial algebra. This course is not available for degree credit toward a bachelor's degree. Credit not available on the basis of special examination. Prerequisite: One year of high school algebra. Recommended for students with a Math ACTE score of 18 or less, or consent of department.
Components: Lecture
Attributes: Remedial - Mathematics, University Course (University of Kentucky)

MA 109(3) **Course ID: 005805**
College Algebra
Selected topics in algebra. Develops manipulative algebraic skills and mathematical reasoning required for further study in mathematics. Includes brief review of basic algebra, quadratic formula, systems of linear equations, introduction to functions and graphing. This course is not available for credit to persons who have received credit in any mathematics course of a higher number with the exceptions of MA 112, 123, 162, 201 and 202. Credit not available on the basis of special examination. Prerequisite: Two years of high school algebra and a Math ACT score of 21 or above or a Math SAT score of 510 or above; or MA 108R (UK); or appropriate score on the math placement test. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: MAT 150
Attributes: University Course (University of Kentucky)

MA 110(4) **Course ID: 006622**
Algebra and Trigonometry for Calculus
This is a course specifically designed for students intending to enroll in a calculus sequence. Topics will include trigonometric functions, exponentials and logarithms, graphs, polar coordinates, conic sections and systems of conics. Students may not receive credit for MA 110 and either of MA 109 or MA 112. This course is not available for credit to students who have received credit in any higher numbered mathematics course except for MA 123, 162, 199, 201 or 202. Credit is not available by special examination. Lecture, three hours; recitation, two hours per week. Pre-requisites: Two years of high school algebra and a Math ACT score of 23 or above, or consent of department. Lecture: 3.0 credits (45 contact hours). Discussion: 1.0 credit (30 contact hours).
Components: Discussion, Lecture
Attributes: QR - Quantitative Reasoning, University Course (University of Kentucky)

MA 111(3) Course ID: 004907
Contemporary Mathematics
An introduction to concepts and applications of mathematics, with examples drawn from such areas as voting methods, apportionment, consumer finance, graph theory, tilings, polyhedra, number theory and game theory. This course is not available for credit to persons who have received credit in any mathematics course of a higher number with the exceptions of MA 112, 123, 162, 201 and 202. This course does not serve as a Prerequisite for any calculus course. Credit not available on that basis of special examination. Prerequisite: Two years of high school algebra and a Math ACT score of 19 or above, or MA 108, or math placement test. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning, University Course (University of Kentucky)

MA 112(2) Course ID: 006624
Trigonometry
A standard course. Includes trigonometric functions, identities, multiple-angle formulas, laws of sines and cosines, and graphs of trigonometric functions. This course is not available to persons who have received credit for any mathematics course of a higher number with the exception of MA 113, 123, 132 and 162. Credit not available by special examination. Pre-requisites: Two years of high school algebra and a Math ACTE score of 21 or above or a Math SAT score of 510 or above; or MA 108R; or appropriate score on the math placement test. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning, University Course (University of Kentucky)

MA 113(4) Course ID: 006625
Calculus I
A course in one-variable calculus, including topics from analytic geometry. Derivatives and integrals of elementary functions (including the trigonometric functions) with applications. Lecture, three hours; recitation, two hours per week. Pre-requisites: Math ACT of 27 or above, or math SAT of 620 or above, or MA 109 (UK) and MA 112 (UK), or MA 110 (UK), or consent of the department. Students who enroll in MA 113 based on their test scores should have completed a year of pre-calculus study in high school that includes the study of the trigonometric functions. Note: Math placement test recommended. Lecture: 3.0 credits (45 contact hours). Discussion: 1.0 credit (30 contact hours).
Components: Discussion, Lecture
Attributes: QR - Quantitative Reasoning, University Course (University of Kentucky)

MA 114(4) Course ID: 006626
Calculus II
A continuation of MA 113, primarily stressing techniques of integration. Lecture, 3 hours; recitation, 2 hours per week. Pre-requisites: High school trigonometry or MA 112 (UK); and a grade of "C" or better in MA 113 (UK) or MA 132 (UK). Lecture: 3.0 credit hours (45 contact hours). Discussion: 1.0 credit (30 contact hours).
Components: Discussion, Lecture
Attributes: QR - Quantitative Reasoning, University Course (University of Kentucky)

MA 123(4) Course ID: 006627
Elementary Calculus and Its Applications
An introduction to differential and integral calculus, with applications to business and the biological and physical sciences. Not open to students who have credit in MA 113. Students who have received credit for MA 113 cannot receive credit for MA 123. Pre-requisites: Math ACT score of 26 or above, or Math SAT of 600 or above, or MA 109 (UK) or appropriate math placement score, or consent of department. Note: Math placement test recommended. Lecture: 4.0 credit hours (60 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning, University Course (University of Kentucky)

MA 162(3) Course ID: 006628
Finite Mathematics and Its Applications
Finite mathematics with applications to business, biology, and the social sciences. Linear functions and inequalities, matrix algebra, linear programming, probability. Emphasis on setting up mathematical models from stated problems. Pre-requisites: MA 109 (UK) or equivalent. Lecture 3.0 credits (45 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning, University Course (University of Kentucky)

MA 193(1) Course ID: 006629
Supplementary Mathematics Workshop I
Laboratory offered (only) as an adjunct to certain mathematics lecture courses. Offered only on a pass/fail basis. Co-requisites: Set by instructor. Lab 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: University Course (University of Kentucky)

MA 194(1) Course ID: 006630
Supplementary Mathematics Workshop II
Laboratory offered (only) as an adjunct to certain mathematics lecture courses. Offered only on a pass/fail basis. Co-requisites: Set by instructor. Lab 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: University Course (University of Kentucky)

MA 201(3) Course ID: 006631
Mathematics for Elementary Teachers
Sets, numbers and operations, problem solving and number theory. Recommended only for majors in elementary and middle school education. Pre-requisites: MA 109 (UK) or MA 111 (UK). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning, University Course (University of Kentucky)

MA 202(3) Course ID: 006632
Mathematics for Elementary Teachers
Algebraic reasoning, introduction to statistics and probability, geometry, and measurement. Pre-requisites: A grade of "C" or better in MA 201 (UK). Also recommended: a course in logic (e.g. PHI 120) or a course in calculus (e.g. MA 123 (UK)). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning, University Course (University of Kentucky)

MA 213(4) Course ID: 006633
Calculus III
MA 213 is a course in multivariate calculus. Topics include three dimensional vectors calculus, partial derivatives, double and triple integrals, sequences, and infinite series. Lecture, 3 hours; recitation, 2 hours per week. Pre-requisites: MA 114 (UK) or equivalent. Lecture: 3.0 credits (45 contact hours). Discussion: 1.0 credit (30 contact hours).
Components: Discussion, Lecture
Attributes: QR - Quantitative Reasoning, University Course (University of Kentucky)

MA 214(3) Course ID: 006634
Calculus IV
MA 214 is a course in ordinary differential equations. Emphasis is on first and second order equations and applications. The course includes series solutions of second order equations and Laplace transform methods. Pre-requisites: MA 213 or equivalent. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning, University Course (University of Kentucky)

MA 241(3) Course ID: 006635
Geometry for Middle School Teachers
A course in plane and solid geometry designed to give middle school mathematics teachers the knowledge needed to teach a beginning geometry course. Cannot be counted toward the mathematics minor or major. Pre-requisites: One semester of calculus or MA 201 (UK) with a grade of "C" or better. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning, University Course (University of Kentucky)

MAI Medical Assisting

MAI 105(3) Course ID: 004342
Introduction to Medical Assisting
Introduces rights, roles, responsibilities and functions of the medical assistant including personal and professional awareness, communication, interpersonal relationships, psychological concepts, ethics and legalities. Lecture: 3 credits (45 contact hours). Prerequisite: Acceptance into the Medical Assisting program or consent of Medical Assisting Coordinator/Director.
Components: Lecture
Attributes: Technical

MAI 120(3) Course ID: 004090
Medical Assisting Laboratory Techniques I
Introduces theory and practical application in the physician's office laboratory including anatomy and physiology, patient preparation, specimen collection and transport, processing and testing, blood collection and prevention of disease transmission. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours). Prerequisite: Acceptance into the Medical Assisting Program or consent of Medical Assisting Coordinator/Director.
Components: Laboratory, Lecture
Attributes: Technical

MAI 140(4) Course ID: 004091
Medical Assisting Clinical Procedures I
Introduces clinical skills and techniques used in the physician's office for patient examination, diagnosis and treatment. Introduces concepts related to electronic health records (EHR). Presents principles and practical applications related to medical asepsis, infection control, vital signs, routine and specialty patient examinations, diagnostic testing, and treatments with an emphasis on OSHA regulations. Prerequisite: Acceptance into the Medical Assisting Program or Consent of Medical Assisting Coordinator/Director. Lecture/Lab: 4.0 credits (90 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MAI 150(3) Course ID: 004092
Medical Assisting Administrative Procedures I
Provides knowledge of the duties required in an office with emphasis placed on a medical office environment. Course content includes communication with patients and co-workers, completion of medical office forms, telephone techniques, filling office correspondence, mail processing, appointment scheduling, processing medical records, and an introduction to medical office computer software. Lecture: 3 credits (45 contact hours). Prerequisite: Acceptance into the Medical Assisting program or consent of Medical Assisting Coordinator/Director.
Components: Lecture
Attributes: Technical

MAI 170(2) Course ID: 004093 Department Consent Required
Dosage Calculations
Provides a review of basic mathematic skills related to dosage calculations, a thorough knowledge of the systems of measurement and conversion, and application skills to perform dosage calculations. Lecture: 2 credits (30 contact hours). Prerequisite: Consent of Medical Assisting Coordinator/Director.
Components: Lecture
Attributes: Technical

MAI 200(3) Course ID: 004094
Pathophysiology for the Medical Assistant
Provides instruction related to common acquired diseases, congenital conditions, injuries, illnesses, and trauma situations as related to the major body systems. Prerequisite: (BIO 135 or BIO 137 and BIO 139) and (CLA 131 or AHS 115 or AHS 120 or MIT 103) or Consent of Medical Assisting Coordinator/Director. All prerequisites must be achieved with a grade of "C" or greater. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MAI 220(3) Course ID: 004095
Medical Assisting Laboratory Techniques II
Relates to laboratory procedures waived complexity testing performed in the physician's office laboratory. Stresses CLIA and OSHA regulations. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours). Prerequisite: MAI 120 with a grade of "C" or greater.
Components: Laboratory, Lecture
Attributes: Technical

MAI 230(3) Course ID: 004096 Department Consent Required
Medical Insurance
Introduces fundamentals of insurance processing and coding for the medical office, with focus on proper procedures for accurate coding systems using the ICD, CPT and HCPCS coding system. Lecture: 3 credits (45 contact hours). Prerequisite: Consent of Program Coordinator/Director.
Components: Lecture
Attributes: Technical

MAI 240(4) Course ID: 004097
Medical Assisting Clinical Procedures II
Continues instruction and application techniques for specialty examination, diagnostic testing and treatment modalities. Emphasizes fundamentals and practical applications of minor office surgical procedures. Lecture: 3 credits (45 contact hours). Lab: 1 credit (45 contact hours). Prerequisite: MAI 140 with a grade of "C" or greater OR Consent of Program Coordinator.
Components: Laboratory, Lecture
Attributes: Technical

MAI 250(3) Course ID: 004098
Medical Assisting Administrative Procedures II
Focuses on compiling and completing financial and insurance claim forms. Includes banking concepts, accounting systems frequently used in the medical office, payment procedures, insurance plans and claims, paper and electronic billing methods, and professional fees. Prerequisite: MAI 150 with a grade of "C" or greater OR Consent of Program Coordinator. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MAI 270(3) Course ID: 004100
Pharmacology for the Medical Assistant
Examines pharmacology with concentration on prescriptions, drug nomenclature, classification of drugs, patient education, medication preparation and administration. Prerequisite: (MAI 170 and (BIO 135 or BIO 137 and BIO 139) and (AHS 115 or AHS 120 or CLA 131 or MIT 103) with a grade of "C" or better) or Consent of Medical Assisting Program Coordinator/Director. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MAI 281(1) Course ID: 004101
Medical Assisting Practicum
Provides introductory practical experience (unpaid) through observation and work assignments in a healthcare setting. Clinical:1 credit (60 contact hours). Prerequisite: Consent of Medical Assisting Program Coordinator/Director.
Components: Clinical
Attributes: Technical

MAI 282(3) Course ID: 004102
Medical Assisting Externship
Allows the student to apply knowledge, perform administrative and clinical procedures, and develop professional attitudes for interacting with other professionals and consumers in the health care field by means of externship assignments (unpaid). Prerequisite: MAI 281 and Consent of Medical Assisting Program Coordinator/Director. Clinical: 3.0 credits (180 contact hours).
Components: Clinical
Attributes: Technical

MAI 284(2 - 3) Course ID: 015672
Medical Assisting Externship
Allows the student to apply knowledge, perform administrative and clinical procedures, and develop professional attitudes for interacting with other professionals and consumers in the health care field by means of externship assignments (unpaid). Pre-requisite: MAI 281 and Consent of Medical Assisting Program Coordinator/Director. Practicum: 2.0 - 3.0 credits (120-180 contact hours).
Components: Practicum
Attributes: Technical

MAI 289(1 - 2) Course ID: 016764
Medical Assisting Assessment Preparation
Prepares student to assume the role of the Medical Assistant by preparing them for successful credentialing while providing the opportunity to apply critical thinking, cognitive skills and performance competencies. Pre-requisite: Consent of Program Coordinator. Laboratory: 1.0-2.0 credit hours (30-60 contact hours).
Components: Laboratory
Attributes: Technical

MAI 299(1 - 4) Course ID: 004341
Instructor Consent Required
Selected Topics: Medical Assisting: (Topic)
Various medical assisting topics, issues and trends will be addressed. Topics may vary from semester to semester at the discretion of the instructors; course may be repeated with different topics to a maximum of six credit hours. Lecture: varies; Laboratory: varies. Prerequisite: Consent of instructor.
Components: Laboratory, Lecture
Attributes: Technical

MAT Mathematics

MAT 11(3) Course ID: 015623
Transitional Algebra
Provides individualized, accelerated, mastery-level progression through entry-level college mathematics prerequisite competencies as defined by KY Council of Postsecondary Education. Note: A passing grade in this course does not necessarily indicate that all prerequisites for all entry-level college mathematics courses have been met. Pre-requisite: KCTCS Placement Exam. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 50(1 - 2) Course ID: 004565
Developmental Mathematics Workshop
Provides supplemental academic support such as extra class sessions, tutoring, and/or increased monitoring to promote student success. May be associated with any developmental math course offered through KCTCS and may be repeated for each math course. Credit cannot be received by special exam. Co-requisite: Set by instructor. Laboratory: 1-2 credits (30-60 contact hours).
Components: Laboratory
Attributes: Remedial - Mathematics

MAT 55(3) Course ID: 004555
Pre-Algebra
Includes operations on integers, decimals and fractions. Introduces exponents, square roots, percents, ratios, proportions, prime factorization, basic geometry, algebraic expressions, basic linear equations, and applications. Pre-requisite: KCTCS placement examination. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics, Course Also Offered in Modules

MAT 55A(1.6) Course ID: 007338
Integers, Fractions and Decimals
Covers the properties of real numbers, prime factorization of whole numbers, rounding of whole numbers, and decimals to an indicated place value. Includes basic operations, order of operations, and absolute value on integers, fractions and decimals. Permits the conversion among fractions, decimals, and percents; evaluation of whole number powers of integers, fractions, and decimals; and the evaluation of square roots of perfect squares of integers, fractions, and decimals. Pre-requisite: KCTCS Placement examination. Lecture: 1.6 credits (24 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 55B(0.7) Course ID: 007339
Algebraic Expressions
Includes the evaluation of algebraic expressions, simplifying algebraic expressions, solving problems involving ratio and proportion, and solving problems involving percent. Pre-requisite: MAT 055A. Lecture: 0.7 credits (10.5 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 55C(0.7) Course ID: 007340
Beginning Linear Equations
Uses both the addition and multiplication properties to solve a linear equation. Includes how to determine the length of the unknown side of a right triangle using the Pythagorean Theorem and to determine the perimeter, circumference, area, surface area, and volume of basic plane figures and solids. Covers how to solve applied problems using these competencies with real world applications. Pre-requisite: MAT 055B. Lecture: 0.7 credits (10.5 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 62(3) Course ID: 007375
Intro to Workplace Mathematics
Prepares students for Business Mathematics, Applied Mathematics, and Technical Mathematics. Includes properties of algebra, using formulas, solving linear equations, percentages, ratios, proportions, plotting points, graphing lines, exponents, and measurement. Encourages applications of algebra and effective use of technology. Pre-requisite: MAT 055 or equivalent as determined by KCTCS placement examination. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 65(3) Course ID: 004556
Basic Algebra
Includes linear equations and inequalities, integer exponents, polynomials, factoring, equations of lines and their graphs, systems of linear equations, and applications. Prerequisite: MAT 055 or KCTCS placement examination. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics, Course Also Offered in Modules

MAT 65A(0.8) Course ID: 007341
Linear Equations and Inequalities
Includes solving linear equations in one variable, literal equations for a specified variable, and linear inequalities. Covers writing sets using interval and set-builder notations and translating verbal statements into algebraic expressions. Pre-requisite: MAT 055 or KCTCS Placement examination. Lecture: 0.8 credits (12 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 65B(0.5) Course ID: 007342
Polynomials
Includes the application of rules of integer exponents; addition, subtraction, and multiplication of polynomials of one or more variables; and division of polynomials of one variable. Pre-requisite: MAT 065A. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 65C(0.8) **Course ID: 007343**
Lines
Includes plotting points in the rectangular coordinate plane; graphing a linear equation in two variables using multiple methods; determining the slope of a line given the two points, a graph, or an equation; determining the intercepts of a line; and determining if two lines are parallel, perpendicular, or neither based on slope. Pre-requisite: MAT 065B. Lecture: 0.8 credits (12 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 65D(0.5) **Course ID: 007344**
Factoring
Includes the factoring of polynomials by finding the greatest common factor, by grouping, and by using special products. Covers factoring general trinomials and solving polynomial equations by factoring. Pre-requisite: MAT 065C. Lecture: 0.5 credits (7.5 contact hours).
Components: Laboratory
Attributes: Remedial - Mathematics

MAT 65E(0.4) **Course ID: 007345**
Systems of Linear Equations
Includes solving systems of linear equations in two variables using multiple methods and solving applied problems using these competencies with real world applications. Pre-requisite: MAT 065D. Lecture: 0.4 credits (6.0 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 75(4) **Course ID: 015659**
Mathematical Literacy
Develops the mathematical thinking skills and understanding needed for non-math and non-science majors, in a one-semester course integrating numeracy, proportional reasoning, algebraic reasoning, and functions. Provides an alternate path to college-level math courses other than college algebra. Pre-requisite: MAT 055 or equivalent as determined by KCTCS placement examination. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 85(3) **Course ID: 007045**
Intermediate Algebra
Includes rational expressions, radical expressions, rational exponents, graphing parabolas, inequalities, equations of lines, functions and applications, with emphasis on solving quadratic, rational, and radical equations. Pre-requisite: MAT 065 or MAT 075 or KCTCS placement examination. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 96(1 - 2) **Course ID: 015815**
Supplemental Mathematics
Provides academic support for students scoring below the system-wide standard into a quantitative-reasoning course. Serves as supplemental co-requisite for students with borderline test scores, as defined in the KCTCS course placement policy. If students withdraw from MAT 096, they must also withdraw from the co-requisite course. Co-requisite: A quantitative-reasoning course requiring supplemental instruction. Lecture: 1.0 - 2.0 credits (15 - 30 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 100(2) **Course ID: 002374**
College Algebra Workshop
Provides parallel and supplemental review of algebra skills needed for success in college algebra for students with a Math ACT of 19-21. (Credit not available by special exam; withdrawal from MAT 100 requires withdrawal from MAT 150; can be offered pass/fail or letter grade basis.) Lecture: 2 credits (30 contact hours). Prerequisite: Concurrent enrollment in MAT 150. NOTE: Effective Fall 2010 ACT 19.
Components: Lecture
Attributes: Other, Course Also Offered in Modules

MAT 105(3) **Course ID: 004557**
Business Mathematics
Covers basic mathematical concepts as applied to finance. Includes percentages, simple and compound interest, annuities, sinking funds, depreciation, and consumer debt, including installment buying, credit cards, and mortgages. Prerequisite: MAT 062 or MAT 065 or equivalent as determined by KCTCS placement examination. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Quantitative Reasoning AAS

MAT 110(3) **Course ID: 004558**
Applied Mathematics
Includes the concepts of ratio and proportion, units and conversions, linear equations in two variables, inequalities, graphing and writing equation of a line, percents, interest, descriptive statistics, and logical symbolism. Emphasizes applications in the various technologies. Prerequisite: MAT 062 or MAT 065 or equivalent as determined by KCTCS placement examination. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Quantitative Reasoning AAS, Course Also Offered in Modules

MAT 116(3) **Course ID: 004559**
Technical Mathematics
Includes some mathematical concepts from algebra, geometry, and trigonometry and applications relevant to these topics. Includes unit conversions, variation, measurement of geometric figures, vectors, and solving right and oblique triangles using trigonometry. Emphasizes applications in the various technologies. Prerequisite: MAT 062 or MAT 065 or equivalent as determined by KCTCS placement examination. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Quantitative Reasoning AAS, Course Also Offered in Modules

MAT 126(3) **Course ID: 004562**
Technical Algebra and Trigonometry
Examines mathematical concepts from algebra and trigonometry. Includes vectors, phasor algebra, variation, trigonometric functions, coordinate systems, system of linear equations, quadratic, rational, exponential and logarithmic equations. Prerequisite: MAT 065 or equivalent as determined by KCTCS placement examination. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Quantitative Reasoning AAS

MAT 146(3) **Course ID: 002375**
Contemporary College Mathematics
Serves as a course in quantitative reasoning and problem solving intended for non-science majors. Includes voting methods, finance, population growth, and at least two additional topics chosen from: apportionment, geometry, logic, probability and statistics, graph theory, number theory, game theory, and set theory. Prerequisite: 1. Math ACT score of 19 or above, 2. Successful completion of Intermediate Algebra, MAT075, MAT 126, or equivalent, or 3. KCTCS placement exam recommendation. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning, Course Also Offered in Modules

MAT 150(3) **Course ID: 002376**
College Algebra
Includes selected topics in algebra and analytic geometry. Develops manipulative skills and concepts required for further study in mathematics. Includes linear, quadratic, polynomial, rational, exponential, logarithmic and piecewise functions; systems of equations; and an introduction to analytic geometry. (Students may not receive credit for both MAT150 and any other College Algebra or Precalculus course. Credit not available on the basis of special exam.) Lecture: 3 credits (45 contact hours). Prerequisites: 1. Math ACT score of 22 or above, 2. Math ACT score of 19 21 with concurrent MAT 100 workshop, 3. Successful completion of Intermediate Algebra, MAT 126, or equivalent, or 4. KCTCS placement exam recommendation.
Components: Lecture
Course Equivalents: MA 109
Attributes: QR - Quantitative Reasoning, Course Also Offered in Modules

MAT 154(2) **Course ID: 000552**
Trigonometry
Includes trigonometric functions, identities, multiple analytic formulas, laws of sines and cosines, graphs of trigonometric functions, and inverse trigonometric functions. Prerequisite: Completion of a college intermediate algebra course or two years of high school algebra. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Same As Offering: MAT 154 Course Equivalents: MAT 155
Attributes: QR - Quantitative Reasoning

MAT 154(2) **Course ID: 000552**
Trigonometry
Includes trigonometric functions, identities, multiple analytic formulas, laws of sines and cosines, graphs of trigonometric functions, and inverse trigonometric functions. Prerequisite: Completion of a college intermediate algebra course or two years of high school algebra. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Same As Offering: MAT 154 Course Equivalents: MAT 155
Attributes: QR - Quantitative Reasoning

MAT 155(3) **Course ID: 004563**
Trigonometry
Includes the trigonometric functions, identities, multiple analytic formulas, laws of sines and cosines, graphs of trigonometric functions in rectangular and polar coordinates, and solving trigonometric equations. Emphasizes applications in each topic. (Students may not receive credit for both MAT155 and any other trigonometry or precalculus course.) Lecture: 3 credits (45 contact hours). Prerequisite: 1. Math ACT score of 22 or above, 2. Math ACT score of 19 21 with concurrent MAT150, 3. Successful completion of Intermediate Algebra, MAT 126, or equivalent, or 4. Placement exam recommendation.
Components: Lecture
Course Equivalents: MAT 154, MAT 154
Attributes: QR - Quantitative Reasoning

MAT 159(4) **Course ID: 000543**
Analytic Geometry and Trigonometry
Includes trigonometric functions, trigonometric identities, graphs of trigonometric functions, and inverse trigonometric functions, polynomial and rational functions, the Algebra of functions, exponential and logarithmic functions, and systems of equations. The course is not available for credit by special examination. The course is not available for credit to persons who have received credit for college algebra or trigonometry course. Prerequisite: Two years of high school algebra and a Math ACT score of 19 or above, or MA 108R (UK) or math placement test. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Course Equivalents: MAT 160
Attributes: QR - Quantitative Reasoning

MAT 160(5) **Course ID: 005312**
Precalculus
Prepares students to enroll in a calculus sequence. Includes trigonometric functions, exponentials and logarithms, graphs, polar coordinates, conic sections, and systems of nonlinear equations. Students may not receive credit for both MAT 160 and either College Algebra or Trigonometry. Credit is not available by special examination. Lecture: 5 credits (75 contact hours). Prerequisite: 1. Math ACT score of 23 or above, 2. Placement exam recommendation, or 3. Consent of instructor.
Components: Lecture
Course Equivalents: MAT 159
Attributes: QR - Quantitative Reasoning

MAT 165(3) **Course ID: 005313**
Finite Mathematics and its Applications
Examines finite mathematics with applications to business, biology and the social sciences including linear functions and inequalities, matrix algebra, linear programming, probability with emphasis on setting up mathematical models from stated problems. Lecture: 3 credits (45 contact hours). Prerequisite: MAT 150 or equivalent.
Components: Lecture
Attributes: QR - Quantitative Reasoning

MAT 170(3) **Course ID: 005314**
Brief Calculus with Applications
Provides an introduction to differential and integral calculus with applications in biological sciences, social sciences, physical sciences, or business with an analysis of algebraic, exponential, and logarithmic functions. (Students may not receive credit for both MAT 170 and MAT 175.) Lecture: 3 credits (45 contact hours). Prerequisite: Successful completion of MAT 150 or Math ACT 27 or above.
Components: Lecture
Attributes: QR - Quantitative Reasoning, Course Also Offered in Modules

MAT 174(4) **Course ID: 000553**
Calculus I
Includes topics from analytic geometry, derivatives and integrals of elementary functions, trigonometric functions, exponential functions, and logarithmic functions, and their applications. A course in one variable calculus. Prerequisite: MATH ACT score of 27 or above, or MAT 150 and MAT 154, or MAT 159, or consent of instructor. Lecture/Lab: 4.0 credits (75 contact hours).
Components: Lecture
Course Equivalents: MAT 175
Attributes: QR - Quantitative Reasoning

MAT 175(5) **Course ID: 005315**
Calculus I
Examines one-variable calculus including limits, differentiation and integration of algebraic, trigonometric, exponential, logarithmic, hyperbolic, and inverse trigonometric functions with applications. Lecture: 5 credits (75 contact hours). Prerequisite: 1. College Algebra and Trigonometry, or equivalent, with grades of "C" or higher, 2. Math ACT 27 or above, 3. Placement exam recommendation, or 4. Consent of instructor.
Components: Lecture
Course Equivalents: MAT 174
Attributes: QR - Quantitative Reasoning

MAT 184(4) **Course ID: 000557**
Calculus II
Stresses techniques of integration and infinite series. Includes transcendental functions and polar coordinates. A continuation of MAT 174. Prerequisite: MAT 174 with a grade of "C" or above. Lecture/Lab: 4.0 credits (75 contact hours).
Components: Lecture
Course Equivalents: MAT 185
Attributes: QR - Quantitative Reasoning

MAT 185(5) **Course ID: 005316**
Calculus II
Includes applications of integration, advanced integration techniques, sequences and infinite series, and parametric and polar equations. Prerequisite: Calculus I, or equivalent, with grade of "C" or higher, or consent of the instructor. Lecture: 5.0 credits (75 contact hours).
Components: Lecture
Course Equivalents: MAT 184
Attributes: QR - Quantitative Reasoning

MAT 190(1 - 2) **Course ID: 004564**
Instructor Consent Required
Mathematics Workshop
Promotes student success in mathematics by providing supplemental instruction in the form of extra class sessions. Pre-requisite: Mathematics course numbered higher than MAT100. Lab: 1.0 - 2.0 credits (30-60 contact hours).
Components: Laboratory
Attributes: Other

MAT 195(1 - 2) **Course ID: 015479**
Mathematics Workshop
Promotes student success in mathematics by providing supplemental instruction in the form of extra class sessions. Co-requisite: Mathematics course numbered higher than MAT100. Lab: 1.0-2.0 credits (30-60 contact hours).
Components: Laboratory
Attributes: Other

MAT 205(3) **Course ID: 005622**
Mathematics For Elementary and Middle School Teachers I
Introduces problem solving, number and numeration systems, whole numbers, integers, rational and irrational numbers, and elementary number theory. Requires demonstration of basic skills in mathematics to receive credit in this course. Prerequisite: If yes, list: MAT 146 or MAT 150 or equivalent, with a minimum grade of "C". Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Other

MAT 206(3) **Course ID: 005623**
Mathematics For Elementary and Middle School Teachers II
Introduces probability and statistics; geometric concepts including congruence and similarity; and measurement. Required demonstration of basic skills in mathematics to receive credit in this course. Prerequisite:MAT 146 or MAT 150 or equivalent, with a minimum grade of "C". Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning

MAT 213(4) **Course ID: 006894**
Calculus III with Linear Algebra
Examines multivariate calculus. Includes partial differentiation, multiple integration, vector calculus, and selected topics from linear algebra including matrices, linear independence of vectors, linear transformations, characteristic values and vectors. Offered primarily for STEM majors. Pre-requisite: Successful completion of Calculus II. Lecture/Lab: 4.0 credits (75 contact hours).
Components: Lecture
Attributes: Other

MAT 214(3) **Course ID: 006895**
Calculus IV
Focuses primarily on first and second order equations. Includes matrix solutions of systems of linear differential equations, both homogeneous and nonhomogeneous. Also includes series solutions, Bessel equations, Laplace transforms, and operator methods. Primarily for STEM majors. Pre-requisite: Successful completion of Calculus III with Linear Algebra. Lecture: 3.0 credits (75 contact hours).
Components: Lecture

MAT 261(3) **Course ID: 003966**
Introduction to Number Theory
Investigates topics from classical number theory, including discussions of mathematical induction, prime numbers, division algorithms, congruences, and quadratic reciprocity. Prerequisite: Consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning

MAT 275(4) **Course ID: 005318**
Calculus III
Examines multivariate calculus including parametric equations; rectangular, cylindrical, and spherical coordinate systems; vectors and vector-valued functions; limits and derivatives of functions of several variables; multiple integration; and line and surface integrals. Prerequisite: MAT185 or equivalent, or Consent of instructor. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning

MAT 285(3) **Course ID: 005319**
Differential Equations
Examines ordinary differential equations emphasizing first and second order equations and applications. Includes series solutions of second order equations and Laplace transform methods. Prerequisite: MAT275 or Consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning

MAT 851(0.3) **Course ID: 007329**
Equations of Lines
Covers the writing equations of lines from given data, verbal descriptions, and graphs; and writing the equation of a line parallel or perpendicular to a given line. Pre-requisite: MAT 065 or MAT 075 or KCTCS placement examination. Lecture: 0.3 credits (4.5 contact hours)
Components: Lecture
Attributes: Remedial - Mathematics

MAT 852(0.6) **Course ID: 007330**
Absolute Value and Inequalities
Includes solving absolute value equations, compound inequalities; solving and graphing absolute value inequalities; and graphing linear inequalities in two variables. Pre-requisite: MAT 0851. Lecture: 0.6 credits (9.0 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 853(0.4) **Course ID: 007331**
Rational Expressions
Includes the simplification of rational expressions, performing basic operations with rational expressions, and solving equations with rational expressions. Pre-requisite: MAT 0852. Lecture: 0.4 credits (6.0 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 854(0.6) **Course ID: 007332**
Radicals
Covers the conversion between radical and rational exponent form, simplification of radicals, performance of operations with radicals, and the solution of equations involving radicals. Pre-requisite: MAT 0853. Lecture: 0.6 credits (9.0 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 855(0.3) **Course ID: 007333**
Quadratics
Includes solving quadratic equations with complex solutions using completing the square and the quadratic formula. Covers graphing parabolas by finding the vertex, finding the axis of symmetry, and plotting points. Pre-requisite: MAT 0854. Lecture: 0.3 credits (4..5 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 856(0.8) **Course ID: 007334**
Functions
Includes the evaluation of a function using function notation, determination of whether a given correspondence or graph represents a function, determination of the domain of a function, [and] identification of the range of a function. Includes modeling and solving applications based on linear, quadratic, and exponential functions. Pre-requisite: MAT 0855. Lecture: 0.8 credits (12 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 1101(0.7) **Course ID: 006142**
Logic and Reasoning
Investigates concepts of logical symbolism, valid and invalid arguments. Uses applications throughout. Prerequisite: MAT 065 or equivalent as determined by KCTCS placement examination. Lecture: 0.7 credit (10.5 contact hours).
Components: Lecture

MAT 1102(0.8) **Course ID: 006143**
Statistics
Develops concepts of descriptive statistics. Emphasizes applications throughout. Prerequisite: MAT 065 or equivalent as determined by KCTCS placement examination. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

MAT 1103(0.7) **Course ID: 006144**
Algebra and Graphing
Develops concepts of ratio and proportion, linear equations in two variables, inequalities, graphing and writing the equation of a line. Emphasizes applications throughout. Prerequisite: MAT 065 or equivalent as determined by KCTCS placement examination. Lecture:0.7 credit (10.5 contact hours).
Components: Lecture

MAT 1104(0.8) **Course ID: 006145**
Consumer Math, Geometry and Measurement
Develops concepts of ratio and proportion, measurement, units and conversions, percents and interest. Emphasizes applications throughout. Prerequisite: MAT 065 or equivalent as determined by KCTCS placement examination. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

MAT 1161(1) **Course ID: 006438**
Technical Trigonometry
Investigates mathematical concepts from trigonometry including vectors and solving right and oblique triangles. Uses applications relevant to trigonometry from the various technologies. Prerequisite: MAT 65 or equivalent as determined by KCTCS placement examination. Lecture: 1.0 credit (15 contact hours)
Components: Lecture

MAT 1162(1) **Course ID: 006439**
Technical Measurement
Investigates mathematical concepts from algebra and geometry. Uses applications from the various technologies relevant to these topics including unit conversion and measurement of geometric figures. Prerequisite: MAT 65 or equivalent as determined by KCTCS placement examination. Lecture: 1.0 credit (15 contact hours)
Components: Lecture

MAT 1163(1) **Course ID: 006440**
Technical Geometry and Variation
Investigates mathematical concepts from algebra and geometry. Uses applications from the various technologies relevant to these topics including variation and measurement of geometric figures. Prerequisite: MAT 65 or equivalent as determined by KCTCS placement examination. Lecture: 1.0 credit (15 contact hours)
Components: Lecture

MAT 1461(0.4) **Course ID: 015855**
Voting Theory
Explain voting theory and describe voting methods. Pre-requisite: Math ACT score of 19 or above, 2. Successful completion of Intermediate Algebra, MAT 126, or equivalent, or 3. KCTCS placement exam recommendation. Lecture: 0.4 credits (6 contact hours)
Components: Lecture

MAT 1462(1.1) **Course ID: 015856**
Finance
Analyze finances, calculate compound interest, analyze savings plans and investments, calculate installment loan payments, calculate income taxes, and analyze budgets. Pre-requisite: MAT 1461. Lecture: 1.1 credits (16.5 contact hours).
Components: Lecture

MAT 1463(0.5) **Course ID: 015857**
Population Growth
Calculate linear, exponential, and logarithmic growth. Pre-requisite: MAT 1462. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

MAT 1464(1) **Course ID: 015858**
Contemporary Math Special Topics
Analyze concepts and perform calculations in at least two of the special topics in contemporary college mathematics: Apportionment, probability and statistics, geometry, logic, graph, theory, number theory, game theory and set theory. Pre-requisite: MAT 1463. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

MAT 1501(0.8) **Course ID: 006146**
Linear and Quadratic Functions
Develops manipulative skills and concepts of linear and quadratic functions required for further study in mathematics. Includes systems of equations. Students may not receive credit for both MAT 150 and any other College Algebra or Precalculus course. Credit not available on the basis of a special exam. Prerequisite: Math ACT score of 22 or above; Successful completion of Intermediate Algebra or MAT126 or equivalent; or KCTCS placement exam recommendation. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

MAT 1502(0.8) **Course ID: 006147**
Polynomial, Rational and Piecewise Functions
Develops manipulative skills and concepts of polynomial, rational and piecewise functions required for further study in mathematics. Students may not receive credit for both MAT 150 and any other College Algebra or Precalculus course. Credit not available on the basis of a special exam. Prerequisite: MAT 1501. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

MAT 1503(0.8) **Course ID: 006148**
Exponential and Logarithmic Functions (Exponential & Logarithmic Fnct)
Develops manipulative skills and concepts of exponential and logarithmic functions required for further study in mathematics. Students may not receive credit for both MAT 150 and any other College Algebra or Precalculus course. Credit not available on the basis of a special exam. Prerequisite: MAT 1502. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

MAT 1504(0.6) **Course ID: 006149**
Applications of Functions
Includes selected topics in algebra and analytic geometry. Develops manipulative skills and concepts required for further study in mathematics. Includes an introduction to analytic geometry. Students may not receive credit for both MAT 150 and any other College Algebra or Precalculus course. Credit not available on the basis of a special exam. Prerequisite: MAT 1503. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

MAT 1601(0.7) **Course ID: 016544**
Graphing Techniques
Prepares students to enroll in a calculus sequence. Includes graphing techniques for functions and circles. Pre-requisites: One of the following: 1) Math ACT score of 23 or above; 2) Placement exam recommendation; or 3) Consent of instructor. Lecture: 0.7 credits (10.5 contact hours).
Components: Lecture

MAT 1602(0.9) **Course ID: 016545**
Functions
Prepares students to enroll in a calculus sequence. Includes operations on polynomial and rational functions, combinations of functions, complex numbers, and the difference quotient. Pre-requisite: MAT1601. Lecture: 0.9 (13.5 contact hours)
Components: Lecture

MAT 1603(0.9) **Course ID: 016546**
Exponent and Log Functions
Prepares students to enroll in a calculus sequence. Includes the properties of inverse functions, specifically exponential and logarithmic functions. Pre-requisite: MAT1602. Lecture: 0.9 (13.5 contact hours)
Components: Lecture

MAT 1604(0.9) **Course ID: 016547**
Trigonometric Functions
Prepares students to enroll in a calculus sequence. Includes an introduction to trigonometric functions through the unit circle and through the right triangle. Pre-requisite: MAT 1603. Lecture: 0.9 credits (13.5 contact hours).
Components: Lecture

MAT 1605(0.9) **Course ID: 016548**
Applications of Trigonometry
Prepares students to enroll in a calculus sequence. Includes applications of trigonometry including proving identities, solving equations, graphing, solving triangles, and using polar coordinates. Pre-requisite: MAT 1604. Lecture: 0.9 (13.5 contact hours).
Components: Lecture

MAT 1606(0.7) **Course ID: 016549**
Conic Sections
Prepares students to enroll in a calculus sequence. Includes conic sections and solving systems of nonlinear equations. Pre-requisite: MAT 1605. Lecture: 0.7 credits (10.5 contact hours).
Components: Lecture

MAT 1701(0.6) **Course ID: 016157**
Limits
Approximate limits graphically and numerically; evaluate limits analytically; list the conditions for the continuity of a function at a point; determine if a function is continuous or discontinuous at a point; determine the intervals of continuity of a function; and evaluate infinite limits and limits at infinity. Pre-requisite: Successful completion of MAT 150 or Math ACT 27 or above. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

MAT 1702(0.8) **Course ID: 016158**
Differentiation
Define the derivative of a function; evaluate the derivative of a function using the definition; evaluate the derivative of a function using differentiation rules for algebraic functions and the product, quotient, and chain rules; use the derivative of a function to find the equation of a tangent line; perform implicit differentiation; define the differential; and use differentials to approximate function values. Pre-requisite: MAT 1701. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

MAT 1703(0.6) **Course ID: 016159**
Differentiation Applications
Determine critical points; determine intervals on which a function is increasing or decreasing; identify relative extrema; identify inflection points and intervals on which a function is concave up or concave down. Solve application problems involving relative rates and optimization for biological, social, or physical sciences and business. Determine whether a function is differentiable at a point. Find the derivative of functions including polynomial, rational, root, exponential, and logarithmic functions. Pre-requisites: MAT 1702. Lecture: 0.6 credits. (9 contact hours).
Components: Lecture

MAT 1704(0.5) **Course ID: 016160**
Integration
Discuss the fundamental theorem of calculus. Find the average value of a function. Find indefinite and definite integrals of a function using integration rules for algebraic functions. Find definite and indefinite integrals using substitution. Pre-requisite: MAT 1703. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

MAT 1705(0.5) **Course ID: 016161**
Applications of Integration
Use definite integrals of find the area under a curve and between two curves. Find the integral of functions using polynomial, rational, root, exponential, and logarithmic functions. Solve application problems using integrals for biological, social, and physical sciences or business. Pre-requisite: MAT 1704. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

MAT 1751(1) **Course ID: 016550**
Limits
Examines limits in one-variable calculus. Pre-requisite: One of the following: 1) College Algebra and Trigonometry, or equivalent, with grades of "C" or higher; 2) Math ACT 27 or above; 3) Placement exam recommendation; or 4) Consent of instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

MAT 1753(1) **Course ID: 016552**
Differentiation Applications
Examines one-variable calculus differentiation of algebraic and trigonometric functions with applications. Pre-requisite: MAT 1752. Lecture: 1.0 credits (15 contact hours)
Components: Lecture

MAT 1754(1) **Course ID: 016558**
Integration
Examines integration of algebraic and trigonometric functions with applications in one-variable calculus. Pre-requisite: MAT 1753. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MAT 1755(1) **Course ID: 016559**
Transcendental Functions
Examines differentiation and integration of exponential, logarithmic, hyperbolic, and inverse trigonometric functions with applications in one-variable calculus. Pre-requisite: MAT1754. Lecture: 1.0 credits (15 contact hours)
Components: Lecture

MAT 1851(1.2) **Course ID: 016560**
Applications of Integration
Examines applications of integration including volumes of revolution, arc length, center of mass, and work. Pre-requisite: Calculus I, or equivalent, with grade of "C" or higher, or Consent of instructor. Lecture: 1.2 credits (18 contact hours).
Components: Lecture

MAT 1852(1.3) **Course ID: 016561**
Advanced Integration Methods
Examines advanced integration techniques in one-variable calculus. Pre-requisite: Calculus I, or equivalent, with grade of "C" or higher, or Consent of instructor. Lecture: 1.3 hours (19.5 contact hours)
Components: Lecture

MAT 1853(1.3) **Course ID: 016562**
Sequences and Infinite Series
Examines sequences and infinite series. Pre-requisite: Calculus I, or equivalent, with grade of "C" or higher, or Consent of instructor. Lecture: 1.3 credits (19.5 contact hours)
Components: Lecture

MAT 2052(0.6) **Course ID: 016756**
Rational Numbers
Includes models of fractions and decimals; operations, repeating and non-repeating decimals; relationships of fractions, decimals, percents and ratios, and applications. Pre-requisite: MAT 2051. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

MAT 2061(0.75) **Course ID: 016760**
Geometry
Includes geometric visualization skills and representations of two- and three-dimensional shapes; two-dimensional symmetries; basic fundamental geometric objects, angles, plane isometries, congruence, similarity and proportional reasoning; and software to explore shapes. Pre-requisite: MAT 146 or MAT 150 or equivalent, with a minimum grade of "C". Lecture: 0.75 credits (11.25 contact hours).
Components: Lecture

MAT 2062(0.75) **Course ID: 016761**
Measurement
Includes identifying and comparing standard and non-standard systems of units; appropriateness and estimation of units, measurement; length, area, volume, and surface area and their relationships, and calculation formulas; composite regular and non-regular shapes. Pre-requisite: MAT 2061- Geometry. Lecture: 0.75 credits (11.25 contact hours)
Components: Lecture

MAT 2063(0.75) **Course ID: 016762**
Data and Statistics
Includes describing and understanding data, dispersion and measures of central tendency; forms of graphical representations, communication and comparison; communicating conclusions through summary statistics; and recognizing ways that statistics and graphic displays can be misleading. Pre-requisite: MAT 2062Measurement. Lecture: 0.75 credits (11.25 contact hours)
Components: Lecture

MBS Medical Billing Specialist

MBS 100(2) **Course ID: 001673**
Introduction to the Health Care Field
This course is designed to acquaint/teach the student with legal issues and ethical concerns as they apply to the patients' medical records. *Student must maintain a 2.0 GPA in A & P to continue in the program
Components: Lecture
Attributes: Technical

MBS 110(6) **Course ID: 001676**
Medical Insurance and Claims Processing
Provides an in-depth knowledge of the various insurance programs, including rules, regulations and guidelines, and follow-up for Medicare, Medicaid, Commercial Insurance, and managed care (HMO), and complete insurance forms manually for reimbursement. Lecture: 6 credits (90 contact hours). Prerequisite: ((AHS 109 or BIO 130 or 135 or (BIO 137 and BIO 139) and (AHS 115 or CLA 131 or OST 103) and Computer Literacy and MBS 100) with a grade of "C" or better) or consent. Corequisite: MBS 120.
Components: Lecture
Attributes: Technical

MBS 120(8) **Course ID: 001678**
Coding for Reimbursement
Prepares the student to code for optimum reimbursement using the ICD, CPT, and HCPCS codes for patient diagnoses and procedures. Prerequisite: ((AHS 109 or BIO 130 or 135 or (BIO 137 and BIO 139) and (AHS 115 or CLA 131 or OST 103) and Computer Literacy and MBS 100) with a grade of "C" or better) or consent. Corequisite: MBS 110.
Components: Lecture
Attributes: Technical

MBS 199(1 - 8) **Course ID: 001680**
Internship
Applies practical knowledge to the outpatient healthcare setting. The student will be assigned a healthcare preceptor at the affiliate site. *This course may be taken for 1-8 credits. Pre-requisites: (MBS 110 and MBS 120) or Consent
Components: Practicum
Attributes: Technical

ME Mechanical Engineering

ME 205(3) **Course ID: 004291**
Introduction to Computer Graphics
Combines freehand sketching techniques, both orthographic and pictorial, and the use of a solid modeling program to describe and define mechanical objects using current industrial standards. An introduction to basic dimensioning and tolerancing techniques is included. Lecture: 2 hours, Laboratory: 4 hours per week.
Components: Laboratory, Lecture
Attributes: Technical

ME 220(3) **Course ID: 000837**
Engineering Thermodynamics I
Fundamental principles of thermodynamics. Prerequisite: PHY 231. Prerequisite or concurrent: MA 214.
Components: Lecture
Attributes: Technical

MES Mechatronic Systems

MES 110(4) **Course ID: 005485**
Mechatronic Systems Electrical Components
Introduces the systems approach to the operation of electrical components and the relationship to voltage, current, resistance, and power in industrial systems. Provides an overview of alternating and direct current fundamentals. Pre-requisite: (COMPASS Scores of Pre-Alg-31; Reading-70; English-39) or (ACT Score of 19 in Math and Reading and 18 in English). Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MES 120(4) **Course ID: 005486**
Mechatronic Systems Mechanical Components
Introduces the systems approach to the operation of mechanical components and the relationship of their application in industrial systems. Provides an overview of rotating machinery fundamentals. Pre-requisite: (COMPASS Scores of Pre- Alg-31; Reading-70; English-39) or (ACT Score of 19 in Math and Reading and 18 in English). Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MES 130(4) **Course ID: 005487**
Mechatronic Systems Hydraulic / Pneumatic Components
Introduces the systems approach to the operation of hydraulic/pneumatic components and the relationship of their application in industrial systems. Provides an overview of digital fundamentals. Pre-requisite: (COMPASS Scores of Pre- Alg-31; Reading-70; English-39) or (ACT Score of 19 in Math and Reading and 18 in English) Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MES 150(4) **Course ID: 005488**
Mechatronic Systems Programmable Logic Controllers
Introduces the systems approach to the operation of Programmable Logic Control components and the relationship of their application in industrial systems. Provides an overview of Programming fundamentals. Prerequisite: (COMPASS Scores of Pre- Alg-31; Reading-70; English-39) or (ACT Score of 19 in Math and Reading and 18 in English) Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MFG Manufacturing

MFG 102(4 - 6) **Course ID: 015604**
Certified Production Technician
Provides industry-led training, assessment, and certification system focused on the industry-wide core skills and knowledge needed by the nation's production workers. Includes the nationwide Manufacturing Skill Standards Council (MSSC) System, based upon federally-endorsed standards. Offers both entry-level and incumbent workers the opportunity to demonstrate that they have mastered the skills increasingly needed in the high-growth, technology-intensive jobs of the 21st century. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 - 3.0 credits (30 - 90 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MFG 125(3) **Course ID: 006669**
Fundamentals of Mechatronics A
Introduces the student to the basics of Mechatronic systems and the operation of electrical, mechanical, pneumatic/hydraulic, and Programmable Logic Control components in an advanced manufacturing system. Presents a detailed explanation of the relationships of voltage, current, resistance, power, the operation of mechanical, pneumatic/hydraulic components, and programming fundamentals in industrial systems. Includes an overview of the fundamentals of alternating and direct current, rotating machinery, digital devices, and programming. (Credit may not be earned for this course if the student has earned credit for MFG 135). Pre-requisite: ENGT110 and at least five other hours of approved technical electives (see Manufacturing Engineering Technology technical elective list) or consent of instructor. Lecture/Lab: 3 credit hours (60 contact hours).
Components: Lecture
Attributes: Technical

MFG 130(3) **Course ID: 006670**
Fundamentals of Mechatronics B
Combines previously learned basic operational and analytical skills as related to a Mechatronics/Advanced Manufacturing system. Applies concepts to a complete advanced manufacturing system wherein various subsystems are collectively used to build a more complex manufacturing system. Teaches the students to troubleshoot a multitude of problems involved in electrical, mechanical, and hydraulic/pneumatic systems. (Credit may not be earned for this course if the student has earned credit for MFG 135). Pre-requisite: MFG125 Fundamentals of Mechatronics A or consent of instructor. Lecture/Lab: 3 credit hours (60 contact hours).
Components: Lecture
Attributes: Technical

MFG 135(6) **Course ID: 006671**
Fundamentals of Mechatronics
Introduces the student to the basics of Mechatronic systems and the operation of electrical, mechanical, pneumatic/hydraulic, and Programmable Logic Control components in an advanced manufacturing system. Combines basic operational and analytical skills with critical thinking and applied troubleshooting. Teaches the students to troubleshoot a multitude of problems involved in typical electrical, mechanical, and hydraulic/ pneumatic systems. (Credit may not be earned for this course if the student has earned credit for MFG 125 or MFG 130.) Pre-requisite: ENGT110 and at least five other hours of approved technical electives (see Manufacturing Engineering Technology technical elective list) or consent of instructor. Lecture/ Lab: 6 credit hours (120 contact hours).
Components: Lecture
Attributes: Technical

MFG 175(2) **Course ID: 006672**
Lean Operations
Introduces students to the principles and practices of lean operations. Employs a lean simulation and examples from Toyota and other lean practitioners to introduce students to lean practices. Discusses Total Productive Maintenance. Lecture/ Lab 2 credit hours (30 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

MFG 265(4) **Course ID: 000713**
Robotics and Industrial Automation
A study of principles and techniques used in automated industrial systems are studied. Emphasis is placed on programming, applications, and interfacing of automated machinery to manufacturing workcells. Lecture: 3 hours; Laboratory: 2 hours. Prerequisite: ET 256 or consent of instructor.
Components: Laboratory, Lecture
Attributes: Technical

MFG 1751(0.5) **Course ID: 006673**
Lean Simulation
Uses a lean simulation to introduce students to lean practices. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

MFG 1752(1) **Course ID: 006674**
Lean Principles
Introduces students to lean principles and concepts using examples from Toyota and other lean practitioner. Lecture: 1.0 credit hour (15 contact hours).
Components: Lecture

MFG 1753(0.5) **Course ID: 006675**
Total Productive Maintenance
Introduces Total Productive Maintenance concepts and practices using industry examples. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

MGT Management

MGT 101(3) **Course ID: 004892**
Quality Management Principles
Students are introduced to fundamental concepts, principles, and practices used to improve quality in organizations. The need for organizational change is reviewed and paradigms of quality are introduced. An overview of areas of change, methods of quality planning and methods for implementing quality policies are provided. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MGT 120(3) **Course ID: 004897**
Personal Finance
Information needed to make intelligent choices and take effective action in the management of personal resources is provided. Topics include financial planning, buying, borrowing, saving, budgeting, investing, insurance, and taxes. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MGT 160(3) **Course ID: 004899**
Introduction to Business
Business careers, terminology, and the interrelationships and complexities of business are introduced and examined in this survey course. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MGT 200(3) **Course ID: 004900**
Small Business Management
Students are introduced to the many facets of establishing, operating and/or owning a small business. Topics include legal forms of business organization, finance, accounting, insurance, governmental regulations and assistance, economics, marketing, and management principles. Prerequisite: MGT 160 or B&E 100, or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: BAS 200
Attributes: Technical

MGT 240(3) **Course ID: 005460**
Business Ethics and Self Management
Emphasizes the need for managers to be self-directed to make ethical decisions. Explores moral principles, community standards and the ethics of decision making at personal and professional levels. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MGT 256(3) **Course ID: 004901**
Operations Management
Concepts and methods for economical planning and control of activities required for transforming a set of inputs into specified goods or services are introduced. Emphasis is given to forecasting, decision analysis, cost analysis, design of production systems, production/marketing relationships, operations planning and control, and the importance of global competitiveness. Prerequisite: MGT 283 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MGT 258(3) **Course ID: 006642**
Project Management
Provides tools used in project management to accomplish the goals of society's varied organizations. Provides insight into human behavior, knowledge of organizational issues, and skill with quantitative methods to allow successful project management. Pre-requisite: MGT283. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MGT 267(3) **Course ID: 004913**
Introduction to Business Law
The student is introduced to the state and federal court systems, tort and criminal law, law of contracts, partnerships, sale of goods, government regulations, bailments and negotiable instruments. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MGT 274(3) **Course ID: 004914**
Human Resource Management
The student is introduced to the basic methods of recruiting, selecting, training, compensating, and maintaining a productive workforce. Concepts of effective employee relations including collective bargaining, contract administration, and safety and health programs are introduced. Techniques for systematic human resource planning and development of policies consistent with government regulations are emphasized. Prerequisite: MGT 283 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MGT 283(3) **Course ID: 004916**
Principles of Management
The functional framework of planning, organizing, leading, and controlling is utilized to introduce the management process. The interdisciplinary nature of management theory is introduced also, with the inclusion of relevant aspects of human behavior and rational decision making. Pre-requisite: BAS 160/MGT 160, B&E 100 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MGT 284(3) **Course ID: 004917**
Applied Management Skills
A capstone course in which management theories and techniques are applied with emphasis on the action-skills that managers need for success. Course topics include delegating, motivating employees, team-building, conflict management, coaching and managing change. Pre-requisite: BAS 283/MGT 283 or prior supervisory experience. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MGT 287(3) **Course ID: 005217**
Supervisory Management
Students study the roles and responsibilities of the supervisor, emphasizing human relations skills while recognizing the behavioral factors of individuals and groups in the work environment. Conceptual knowledge base and skills to support the supervisor's role and responsibilities are identified and developed. Prerequisite: MGT 283 or consent of the instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MGT 288(3) **Course ID: 004918**
Self-Management
The need for managers to be self-directed before they can manage successfully the work of others is emphasized. Contemporary approaches to developing the behavioral skills needed to improve personal effectiveness are explored. Topics include personal planning and goal setting, time management, stress management, interpersonal and human relations skills. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MGT 292(3) **Course ID: 016855**
Strategic Management
Introduces students to strategic planning and management concepts and processes in this capstone course. Provides in-depth examination of strategic planning and implementation. Provides a framework for internal and external organizational analysis. Applies decision-making, problem-solving, accounting and financial analysis in reviewing contemporary businesses and industries. Pre-requisite: MGT 283 or BAS 283. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MIL Military Science

MIL 101(2) **Course ID: 015681**
Military Mountaineering and Leadership
This course is designed to be an introductory course to military science with emphasis on the following: Goal-setting, Physical Fitness Planning, Stress and Time Management, Mountaineering (which includes terminology, tools, and skills, rope management, knots, and rappelling/ belaying techniques), and Basic Marksmanship. Additionally, cadets will receive an overview of Army Officership and the leadership skills necessary to succeed in any chosen career. Special attention will be given to the opportunities afforded an Army officer. Satisfactory completion of this course may be used to fulfill a General Education Category F requirement at Western Kentucky University (WKU). Lecture: 2.0 credits (2 contact hours).
Components: Lecture
Attributes: University Course (Western Kentucky University)

MIT Medical Information Technology

MIT 103(3) **Course ID: 004510**
Medical Office Terminology
Introduces students to medical terminology including familiar elements, body systems, operative procedures, pharmacology, and methods of researching medical information including, but not limited to, names and descriptions of diseases and drugs. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

MIT 104(3) **Course ID: 004103**
Medical Insurance
Introduces students to the basics of medical insurance including: insurance terminology, various coding systems, government programs, and general insurance procedures. Pre-requisite Or Co-requisite: MIT 103 or AHS 115 or CLA 131. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MIT 106(3) **Course ID: 004104**
Introduction to Medical Transcription
Provides experience in transcription of basic medical dictation: incorporating English usage, transcription skills, medical knowledge, and proofreading and editing skills while meeting progressively demanding accuracy and productivity standards. Prerequisite: Computer Literacy course and OST 110 and (ENG 101 or OST 108) and (AHS 115 or CLA 131 or MIT 103). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MIT 204(3) **Course ID: 004105**
Medical Coding
Develops medical coding skills using government mandated coding systems as applied. Includes other reimbursement methods and medical insurance concepts. Prerequisite Or Co-requisite: MIT 104, BIO 135 or Equivalent. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MIT 205(3) **Course ID: 004509**
Advanced Medical Coding
Applies advanced coding rules for various coding systems and applies the rules to code patient services for a variety of payment systems emphasizing payment fraud and/or abuse. Prerequisite: MIT 204 or MBS 120. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MIT 206(3) **Course ID: 004106**
Medical Transcription
Applies advanced concepts of medical transcription and provides advanced practice. Prerequisite: MIT 106 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MIT 208(3) **Course ID: 004507**
Instructor Consent Required
Inpatient Coding
Designed for students who have completed an entry-level coding course and are ready to move into more advanced hospital coding. Emphasizes inpatient coding using current government mandated coding systems. Prerequisite: MIT 204. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MIT 212(1) **Course ID: 004506**
Medications
Introduces the student to Pharmacology; the most commonly used drugs, their names, and classification; and drug reference books while stressing spelling. Prerequisite: (MIT 103 or AHS 115 or CLA 131) or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

MIT 217(3) **Course ID: 004107**
Medical Office Procedures
Provides a working knowledge of the duties required in a medical office. Includes professional and career responsibilities, interpersonal communication, administrative responsibilities, and financial administration. Pre-requisite Or Co-requisite: OST 110. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MIT 219(3) **Course ID: 006970**
Coding Exam Preparation
Designed to prepare medical coding students to take a certifying exam to become a professional outpatient coder as offered by AAPC or PHIA. Includes outpatient coding cases and review of medical terminology, basic anatomy, basic pathophysiology, reimbursement issues, and advanced coding guidelines for CPT, ICD-9-CM, and HCPCS coding systems. Pre-requisite: (MIT 204 and MIT 205) or MBS 120. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MIT 224(3) **Course ID: 016402**
Medical Practice Management
Introduces students to medical practice management from roles of staff members in healthcare to skills and responsibilities of the manager in relation to compliance and regulatory agencies. It identifies the requirements of managing the revenue cycle, compliance regulations, human resources, health information, and the general business processes. Pre-requisite Or Co-requisite: MIT 230, MIT 217, MIT 104. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MIT 227(3) **Course ID: 004108**
Medical Office Software
Provides a working knowledge of computer management software in a simulated medical office setting. Prerequisite: (MIT 103 or AHS 115 or CLA 131) and Computer Literacy. Corequisite: MIT 217. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MIT 228(3) **Course ID: 006340**
Electronic Medical Records
Provides a working knowledge of computerized medical records software used in a variety of healthcare facilities. Pre-requisite: MIT 217. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MIT 230(3) **Course ID: 004109**
Medical Information Management
Identifies and applies rules and regulations of medical filing systems and procedures. Emphasizes management of both hard copy and magnetic media using alphabetic, numeric, chronologic, and color-coded filing systems. Concepts mastered for file retention and archiving. Discusses legal and ethical aspects of medical records. Pre-requisite Or Co-requisite: Computer Literacy Course. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MIT 295(3) **Course ID: 006971**
Medical Information Technology Capstone
Enhances the student's transition from class to work by providing unpaid learning activities related to the MIT field. Integrates work experience with academic instruction. Includes an internship, field experiences, and/or simulated work experiences in which the student applies previously or concurrently learned concepts to practical work situations within the MIT field. Pre-requisite: Consent of Program Coordinator. Lecture: 1.0 credit (15 contact hours). Practicum: 2.0 credits (120 credit hours).
Components: Lecture, Practicum
Attributes: Technical

MIT 296(1 - 3) **Course ID: 007326**
Medical Information Technology Internship
Enhances transition from school to work by providing non-paid work experience which provides the opportunity to apply acquired occupational skills in a realistic setting. Requires approval of the MIT Program Coordinator. Prerequisite: Consent of instructor. Pre-requisite: Consent of Program Coordinator. Practicum: 1.0 - 3.0 credits (45-135 contact hours).
Components: Practicum
Attributes: Technical

MIT 1031(1) **Course ID: 016393**
Intro to Med Terms & Systems
Introduces medical terminology including root words, prefixes and suffixes as well as general medical terms. Introduces medical terms related to the skeletal, muscular, blood, lymph, cardiovascular and respiratory systems. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MIT 1032(1) **Course ID: 016394**
Intermediate Body Systems
Introduces medical terms related to the blood, lymph, cardiovascular, respiratory, digestive and urinary systems as well as skin. Pre-requisite: MIT 1031. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MIT 1033(1) **Course ID: 016395**
Diagnostics and Pharmacology
Introduces the nervous, endocrine, reproductive systems as well as eyes and ears Introduces medical terms related to pharmacology and diagnostic and imaging procedures. Pre-requisite: MIT 1032. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MIT 1041(1) **Course ID: 016396**
Intro to Medical Insurance
Introduces the basics of medical insurance including: insurance terminology and government programs. Pre-requisite OR Co-requisite: MIT 103 or MIT 1033 or AHS 115 or CLA 131. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MIT 1042(1) **Course ID: 016397**
Medical Coding Overview
Introduces various coding systems. Pre-requisite: MIT 1041. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MIT 1043(1) **Course ID: 016398**
Intro to Medical Forms
Introduces general insurance procedures and forms. Pre-requisite: MIT 1042. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MIT 2041(1) **Course ID: 016399**
Coding Systems
Develops medical coding skills using government mandated coding systems. Includes review of health records, selection of codes, interaction with physicians, and more. Pre-requisite: MIT 104 or Consent of instructor. Co-requisite: BIO 135 or Equivalent; MIT 104. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MIT 2042(1) **Course ID: 016400**
Inpatient Coding
Develops medical coding skills for inpatient coding systems. Includes reimbursement methodologies and advanced coding practices for inpatient coding. Pre-requisite: MIT 2041 or Consent of instructor. Lecture: 1.0 credit (15 contact hours)
Components: Lecture

MIT 2043(1) **Course ID: 016401**
Outpatient Coding
Develops medical coding skills for outpatient coding systems. Includes reimbursement methodologies and advanced coding practices for outpatient coding. Pre-requisite: MIT 2042 or Consent of instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MIT 2081(1) **Course ID: 016843**
Diagnosis Coding
Examines diagnosis coding using current government mandated coding systems. Pre-requisite: MIT 204 or consent of instructor. Lecture: 1.0 credits (15 contact hours)
Components: Lecture

MIT 2082(1) **Course ID: 016852**
Procedure Coding
Examines procedure coding using current government mandated coding systems. Pre-requisite: MIT 2081 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

MIT 2083(1) **Course ID: 016853**
Coding Practice and Case Studies
Reinforces coding through practice and case studies in the inpatient hospital setting. Pre-requisite: MIT 2082 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours)
Components: Lecture

MIT 2171(1) **Course ID: 016847**
Careers in the Medical Office
Analyze professional and career opportunities in the medical office. Prepare for an interview and create employment communications. Pre-requisite OR Co-requisite: OST 110. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

MIT 2172(1) **Course ID: 016848**
Records Management
Provides knowledge of records management and medical abbreviations and terminology in the medical office. Pre-requisite: MIT 2171. Pre-requisite OR Co-requisite: OST 110. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

MIT 2173(1) **Course ID: 016849**
Admin and Financial Management
Provides knowledge of administrative responsibilities and financial administration in the medical office. Pre-requisite: MIT 2172. Pre-requisite OR Co-requisite: OST 110. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

MIT 2241(1) **Course ID: 016875**
Managing the Medical Office
Emphasizes the healthcare setting, medical office communications, and human resource management. Pre-requisite OR Co-requisite: MIT 230, MIT 217, MIT 104. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

MIT 2242(1) **Course ID: 016876**
Managing the Medical Record
Focuses on the correct use, care, regulations and rules concerning medical records. Pre-requisite OR Co-requisite: MIT 2241, MIT 230, MIT 217, MIT 104. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

MIT 2243(1) **Course ID: 016877**
Medical Office Revenue Cycle
Emphasizes accounting and payroll as well as marketing of the medical office. Pre-requisite OR Co-requisite: MIT 2242, MIT 230, MIT 217, MIT 104. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

MIT 2281(1) **Course ID: 016403**
Intro to E-Health Records
Provides an introduction to electronic health records and gives students a working knowledge of industry-standard electronic medical records software program emphasizing ethical and regulatory issues and methods. Pre-requisite: MIT 227 or consent of instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MIT 2282(1) **Course ID: 016404**
Clinical Office Administration
Provides a working knowledge of computerized medical records software to simulate tasks including to create/maintain patient records and maintain office scheduling. Pre-requisite: 2281 or consent of instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MIT 2283(1) **Course ID: 016405**
Clinical Tools and Procedures
Provides a working knowledge of computerized medical records software to complete scenario based projects to use templates and create/analyze reports. Emphasizes test and diagnosis codes. Pre-requisite: 2282 or consent of instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MIT 2301(1) **Course ID: 016406**
Intro to Medical Info Mgmt
Identify rules and regulations of medical filing systems and procedures. Pre-requisite: Digital Literacy. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MIT 2302(1) **Course ID: 016407**
Applied Medical Info Mgmt
Apply rules and regulations of medical filing systems and procedures. . Emphasizes management of both hard copy and magnetic media using alphabetic, numeric, chronologic, and color-coded filing systems. Pre-requisite: MIT 2301. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MIT 2303(1) **Course ID: 016409**
Records Mgmt/Legal Issues
Master file retention and archiving. Discusses legal and ethical aspects of medical records. Reinforces rules and regulations of medical filing systems and procedures.Pre-requisite: MIT 2302. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MIT 2951(1) **Course ID: 016840**
Office Skills Development
Introduce a simulated office setting. Acquire knowledge, skills and abilities involved with managing work flow processes and procedures, the work environment. Apply decision making and working autonomously. Pre-requisite: Consent of Program Coordinator. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

MIT 2952(1.5) **Course ID: 016841**
Simulations/Work-based Learning
Complete a diverse set of learning activities and assigned tasks utilizing medical office simulation software or participate in a work-based learning experience such as internship/apprenticeship. Analyze and evaluate documents for data entry, storage, and data retrieval. Pre-requisite: MIT 2951 or Consent of Program Coordinator. Practicum: 1.5 credits (90 contact hours).
Components: Practicum

MIT 2953(0.5) **Course ID: 016842**
Program Pathway Assessment
Demonstrate proficiency using medical office simulated software, office system procedures, and the utilization of workplace principles through end of program assessment. Pre-requisite: MIT 2952 or Consent of Program Coordinator. Practicum: 0.5 credits (30 contact hours).
Components: Practicum

MKT Marketing

MKT 100(3) **Course ID: 001713**
Introduction to Marketing
This course introduces the essentials of marketing for small and large organizations and develops concepts such as publicity, promotion, and market research, while emphasizing the importance of communication, interpersonal and management skills. (Keyboarding recommended)
Components: Lecture
Attributes: Technical

MKT 155(3) **Course ID: 004898**
Personal Selling
The professional selling process which involves a series of interrelated activities is introduced. Emphasis is placed on planning and delivery of sales presentations. The six selling steps are examined - prospecting, qualifying, presenting, answering objections, closing, and the after-sale service. Students demonstrate effective sales techniques through simulation and role playing. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MKT 282(3) **Course ID: 004915**
Principles of Marketing
The marketing function is introduced and applied to various types of business organizations with attention to the marketing concept. Topics include the marketing mix of product, price, promotion, and distribution decisions; international marketing; and social responsibility. Prerequisite: MGT 160 or B&E 100, or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MKT 290(3) **Course ID: 004919**
Advertising and Promotion
The principles of advertising will be introduced to the student. Topics will include economic and social aspects; advertising research; media strategy; consumer behavior; and legal issues in advertising. Pre-requisite: BAS 282/MKT 282. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MKT 291(3) **Course ID: 004920**
Retail Management
Retail structure, merchandising, promotions, store control, and decision making are examined in this course. Fundamental principles of store organization, consumer behavior, and customer service are addressed. Retailing trends, opportunities, and problems are included also. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MKT 293(3) **Course ID: 004921**
Buying and Merchandising
Decision making strategies are used to solve problems inherent in merchandise selection. Analysis of financial statements and their relationship to buying situations are included, along with cost control and the establishment of sales goals and objectives. Mark-ups, reduction planning, unit cost control, and other computations are emphasized. Pre-requisite: BAS 291/MKT 291. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MLT Medical Laboratory Technology

MLT 101(3) **Course ID: 004073**
Introduction to the Clinical Laboratory
Includes an orientation to the laboratory and management structure, professional organizations, professional ethics, communication, and record keeping. Covers medical terminology and abbreviations, quality assurance procedures, laboratory safety rules and procedures, specimen processing, laboratory automation, and basic immunology. Introduces the student to the various laboratory departments. Prerequisite: Admission into the MLT program or permission of the MLT Program Director or MLT Clinical Coordinator. Lecture/Lab: 3.0 credits (75 contact hours)
Components: Laboratory, Lecture
Attributes: Technical

MLT 112(2) Course ID: 004177
Urinalysis
Focuses on methodology and clinical significance of urine chemical analysis, interferences with chemical analysis procedures, screening methods used in diagnostic determinations, collection and handling of specimens, and the characteristics and clinical significance of formed elements of the urine. Includes the physiological function of the kidneys and diseases which affect the urinary system. Pre-requisite: Admission into the MLT program or permission of the MLT program director/coordinator. Pre-requisite Or Co-requisite: MLT 101 or PHB 170. If taken as a pre-requisite, a minimum grade of "C".Lecture/Lab: 2 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MLT 115(2) Course ID: 004178
Serology
Admission into the MLT program or permission of MLT Program Director/Coordinator. Pre-requisite: Admission into the MLT program or permission of MLT program director/coordinator. Lecture/Lab: 2.0 credits (37.50 contact hours).
Components: Lecture

MLT 119(3) Course ID: 004179
Applied Laboratory
Prepares the MLT student for clinical rotation into the major areas of the laboratory. Includes practical application in Hematology, Clinical Microbiology, Immunohematology, Urinalysis, Serology, and Clinical Chemistry. Pre-requisite: Admission into the MLT program or permission of the MLT program director/coordinator. Pre-requisite OR Co-requisite: MLT 101. If taken as a pre-requisite, a minimum grade of "C". Lecture/Lab: 3.0 credits (105 contact hours)
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

MLT 205(3) Course ID: 004181
Clinical Microbiology I
Introduces the application of microbiological principles to clinical laboratory practice. Includes safety and use of standard precautions, staining, selection and use of media, specimen processing, cultivation and identification of bacteria, and antimicrobial susceptibility testing. Prerequisite: [(MLT 101 and MLT 119) or BIO 225 with a grade of "C" or greater]; admission into the MLT program; permission by MLT program director/coordinator. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MLT 206(2) Course ID: 004182
Clinical Microbiology II
Continues with the application of microbiological principles to clinical laboratory practice. Includes mycology, parasitology, virology, and mycobacteriology. Prerequisite: Admitted into the MLT program; permission of the MLT program director/coordinator. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MLT 207(2) Course ID: 000282
Introductruction to Clinical Diagnostic Microbiology
Reviews the basic concepts of bacterial cell structure, physiology, nomenclature and classification. Emphasizes safety in the microbiology department of the laboratory. Introduces specimen processing as it relates to the microbiology department in the clinical laboratory. Covers the practical importance of identifying microorganisms through morphology on culture media, appearance on gram stain, and biochemical reactions. Pre-requisite: Admission into the MLT program OR permission of the MLT Program Director/MLT Clinical Coordinator. Lecture/Lab: 2.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MLT 208(3) Course ID: 006399
Clinical Diagnostic Microbiology I
Discusses theoretical concepts, disease processes, identification schemas, diagnostic characteristics, biochemical reactions, susceptibility testing, and isolation techniques of gram positive and gram negative microorganisms associated with infections diagnosed in the clinical laboratory microbiology department. Pre-requisite: MLT 207with a grade of "C" or better OR permission of the MLT Program Director/MLT Clinical Coordinator. Lecture/Lab: 3.0 credits (75 contact hours).
Components: Lecture
Attributes: Technical

MLT 209(2) Course ID: 006400
Clinical Diagnostic Microbiology II
Exposes the student to a study of anaerobes, spore forming gram positive bacilli, virology, mycobacterium, mycoplasma, spirochetes, mycology and parasitology with focus on the clinical diseases and diagnostic procedures in the microbiology department of the clinical laboratory. Prer-equisite: MLT 208 with a grade of "C" or better OR permission of the MLT Program Director/MLT Clinical Coordinator Lecture/Lab: 2.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MLT 215(4) Course ID: 004183
Hematology I
Covers hematopoiesis and classic methodologies of standard hematology procedures. Includes the principles of various automated hematology analyzers, histograms and scattergrams. Provides students with the opportunity to perform basic hematology and coagulation procedures, correlate laboratory data to aid in diagnosis, and describe methodology of procedures and their clinical significance. Includes mechanisms of coagulation, routine coagulation testing, disease states associated with coagulation abnormalities, platelet evaluation, fibrinolysis and anticoagulant therapy. Pre-requisite: MLT 101 with a grade of "C" or greater OR admission into the MLT program OR permission by MLT program coordinator. Lecture/Lab: 4 credits (105 contact hours).
Components: Lecture
Attributes: Technical

MLT 216(3) Course ID: 004184
Hematology II
Continues the study of hematology. Includes a study of anemias, leukemias, lymphomas, miscellaneous abnormal white blood cell disorders to assess hematologic changes and correlate laboratory data to diagnosis. Covers body fluids and other special hematologic procedures. Prerequisite: MLT 215 with a grade of "C" or greater; permission by MLT program director/coordinator. Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MLT 217(3) Course ID: 006401
Fundamentals of Hematology
Presents classic methodologies related to standard hematology procedures. Includes collection and processing of proper specimens, performance of quality control, and analysis of fundamental hematological parameters to aid in diagnosis. Pre-requisite: Admission into the MLT program OR permission of the MLT Program Director/MLT Clinical Coordinator. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

MLT 218(4) Course ID: 006402
Clinical Hematology
Continues the study of hematology. Includes hemostasis, anemias, leukemias, lymphomas, miscellaneous abnormal white blood cell disorders, body fluid analysis and other special hematological procedures. Prerequisite: A grade of "C" or better in MLT 217 OR permission of the MLT Program Director/MLT Clinical Coordinator. Lecture/Lab: 4.0 credits (75 contact hours).
Components: Lecture
Attributes: Technical

MLT 225(2) Course ID: 004185
Immunohematology I
Includes the principles of immunology in relation to blood banking, blood group systems, donor processing and screening, antibody screening, and blood components. Prerequisite: MLT 101with a grade of "C" or greater; admission into the MLT program; permission by MLT program director/coordinator. Lecture: 1.0 credit(15 contact hours). Laboratory: 1.0 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MLT 226(2) Course ID: 004186
Immunohematology II
Includes antibody screening and panel interpretation, compatibility testing, viral markers and related disease states, hemolytic disease, and HLA markers. Pre-requisite: MLT 225 or Permission by MLT Program Director/ Coordinator. Lecture/Lab: 2.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MLT 227(4) Course ID: 004570
Immunohematology
Covers principles and practices in blood banking, including topics such as blood group systems, blood components, antibody identification and compatibility testing. Prerequisite: MLT 101with a grade of "C" or greater or permission of MLT program director/coordinator. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (75 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MLT 233(3) Course ID: 004187
Clinical Chemistry I
Provides a review of basic inorganic chemistry and organic chemistry principles and types of instrumentation commonly used in a medical laboratory. Covers carbohydrates, non-protein nitrogen compounds, proteins, lipids and enzymes as related to clinical diagnosis. Introduces quality control procedures, including statistical calculations for graph preparation and interpretation of gathered data. Prerequisite: (MLT 101 with a grade of "C" or greater and admission into the MLT program) or MLT Program Coordinator/Director. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MLT 234(2) Course ID: 004188
Clinical Chemistry II
Presents the physiology and testing of liver function, hormones, electrolytes and acid-base metabolism. Includes toxicology and therapeutic drug monitoring, tumor markers, and special chemistries. Prerequisite: MLT 101 with a grade of "C" or greater; permission by MLT program director/coordinator. Pre-requisite Or Co-requisite: MLT 233. If taken as a pre-requisite, a minimum grade of C. Lecture: 1.0 credit(15 contact hours). Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MLT 247(3) Course ID: 006403
Introduction to Clinical Chemistry
Introduces the student to a variety of automated instrumentation and methodologies of selected chemistry test procedures. Exposes student to the basic principles as well as the techniques used in clinical chemistry to assess carbohydrates, non-protein nitrogen compounds, amino acids and proteins, lipids and lipoproteins, and enzymes as related to clinical diagnosis. Acquaints the student with basic laboratory mathematics and quality assurance procedures utilized in the clinical laboratory department. Prerequisite: Admission into MLT program OR permission of the MLT Clinical Coordinator/MLT Program Director. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

MLT 248(3) **Course ID: 006404**
Advanced Clinical Chemistry
Continues the study of clinical chemistry. Presents a study of lipids and lipoproteins, acid/base balance, electrolytes, endocrine system, liver, gastrointestinal and pancreatic function, therapeutic drug monitoring, and toxicology. Prerequisite: MLT 247 with a grade of "C" or greater. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

MLT 275(1) **Course ID: 006831**
Clinical Experience
Familiarizes the student with the clinical laboratory environment as it relates to phlebotomy and front office responsibilities. Includes blood collection procedures, handling and answering internal phone calls, communication with and registration of patients, insurance filing and data entry. Pre-requisite: Admission into the MLT program or permission of the MLT program director or coordinator. Clinical: 1.0 credit (30 contact hours).
Components: Clinical

MLT 278(4 - 5) **Course ID: 004253**
Practicum I
Develops performance skills and professional attitude in the student in assigned areas of the clinical laboratory. Utilizes and depends upon external institutions to ensure adequate clinical education and training. Each clinical laboratory affiliate has designated personnel to assist the student in all assigned areas of the clinical laboratory. Provides a prescribed schedule of rotations in various departments of the laboratory for each individual student by the MLT Program Director. This practicum is designed to develop skills with strong supervisory instruction in all assigned departments. Pre-requisite: (MLT 101 with a grade of "C" or better) Or Admission into MLT program; Or permission by MLT program director/coordinator. Pre-requisite: MLT 101 with a grade of "C" or better OR Admission into MLT program OR permission by MLT Program Director/Coordinator. Practicum: 4-5 credits (240-300 contact hours).
Components: Practicum
Attributes: Course Also Offered in Modules, Technical

MLT 279(4 - 5) **Course ID: 004254**
Practicum II
Develops performance skills and professional attitude in the student in assigned areas of the clinical laboratory. Utilizes and depends upon external institutions to ensure adequate clinical education and training. Each clinical laboratory affiliate has designated personnel to assist the student in all assigned areas of the clinical laboratory. Provides a prescribed schedule of rotations in various departments of the laboratory for each individual student by the MLT Program Director. This practicum is designed to develop skills with strong supervisory instruction in all assigned departments. Pre-requisite: : MLT 101 with a grade of "C" or better OR Admission into MLT program OR permission by MLT Program Director/Coordinator. Practicum: 4-5 credits (240-300 contact hours).
Components: Practicum
Attributes: Course Also Offered in Modules, Technical

MLT 1191(1.5) **Course ID: 005338**
Applied Laboratory Part 1
Prepares the MLT student for clinical rotation into the major areas of the laboratory. Includes practical application in Hematology, Clinical Microbiology, and Urinalysis. Prerequisite: MLT 101 with a grade of "C" or greater and admission into the program. Lecture: 0.5 credit (7.5 contact hours). Laboratory: 1.0 credit (45 contact hours).
Components: Laboratory, Lecture

MLT 1192(1.5) **Course ID: 005339**
Applied Laboratory Part 2
Prepares the MLT student for clinical rotation into the major areas of the laboratory. Includes practical application in Clinical Microbiology, Immunohematology, Serology, and Clinical Chemistry. Prerequisite: MLT 1191 with a grade of "C" or greater. Lecture: 0.5 credit (7.5 contact hours). Lab: 1.0 credit (45 contact hours).
Components: Laboratory, Lecture

MLT 2781(2 - 2.5) **Course ID: 005340**
Practicum I Part 1
Develops performance skills and professional attitude in the student in assigned areas of the clinical laboratory. Utilizes and depends upon external institutions to insure adequate clinical education and training. Each clinical laboratory affiliate has designated personnel to assist the student in all assigned areas of the clinical laboratory. Provides a prescribed schedule of rotations in various departments of the laboratory for each individual student by the MLT program director. This practicum is designed to develop skills with strong supervisory instruction in all assigned departments. Prerequisite: MLT 101 with a grade of "C" or greater or admission into the program. Practicum: 2 - 2.5 credits (120-150 contact hours).
Components: Practicum

MLT 2782(2 - 2.5) **Course ID: 005341**
Practicum I Part 2
Develops performance skills and professional attitude in the student in assigned areas of the clinical laboratory. Utilizes and depends upon external institutions to insure adequate clinical education and training. Each clinical laboratory affiliate has designated personnel to assist the student in all assigned areas of the clinical laboratory. Provides a prescribed schedule of rotations in various departments of the laboratory for each individual student by the MLT program director. This practicum is designed to develop skills with strong supervisory instruction in all assigned departments. Prerequisite: MLT 2781 with a grade of "C" or greater. Practicum: 2 - 2.5 credits (120-150 contact hours).
Components: Practicum

MLT 2791(2 - 2.5) **Course ID: 005342**
Practicum II Part 1
Develops career entry level performance skills and professional attitude in the student in assigned areas of the clinical laboratory. Provides an opportunity for more responsibility and independence with previously learned procedures. Enhances the student's transition to the world of work by providing work experiences in a clinical setting. Utilizes and depends upon external institutions to insure adequate clinical education and training. Each clinical laboratory affiliate has designated personnel to assist the student in assigned areas of the clinical laboratory. Provides a prescribed schedule of rotations in various departments of the laboratory for each individual student by the CLT program director. Prerequisite: MLT 101 with a grade of "C" or greater; OR admission to the MLT program. Practicum: 2 - 2.5 credits (120-150 contact hours).
Components: Practicum

MLT 2792(2 - 2.5) **Course ID: 005343**
Practicum II Part 2
Develops career entry level performance skills and professional attitude in the student in assigned areas of the clinical laboratory. Provides an opportunity for more responsibility and independence with previously learned procedures. Enhances the student's transition to the world of work by providing work experiences in a clinical setting. Utilizes and depends upon external institutions to insure adequate clinical education and training. Each clinical laboratory affiliate has designated personnel to assist the student in assigned areas of the clinical laboratory. Provides a prescribed schedule of rotations in various departments of the laboratory for each individual student by the MLT program director. Prerequisite: MLT 2791 with a grade of "C" or greater. Practicum: 2 - 2.5 credits (120-150 contact hours).
Components: Practicum

MNA Medicaide Nurse Aid

MNA 100(3) **Course ID: 001772**
Medicaid Nurse Aide
Provides knowledge and skills for nurse aides to assume the role and responsibility required in a long term care setting. Focuses on communication, infection control, safety, resident/patient rights, and basic nursing skills. Note: Faculty and clinical sites must comply with applicable Federal and Kentucky laws and regulations including but not limited to 42 USC 1396r and 907 KAR 1:450. Lecture/Lab: 3 credits (75 contact hours). (45:1 ratio).
Components: Lecture
Course Equivalents: NAA 100
Attributes: Technical

MNG Mining Technology

MNG 102(3) **Course ID: 007356**
Introduction to Mine Engineering and Mining Technology
Provides orientation to the mining engineering and mining technology professions. Includes introduction to key mining engineering activities and functions, mining methods and equipment, and health and safety subsystems. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

MNG 123(4) **Course ID: 000576**
Mining Electricity I
Qualifies students to take the Mine Electrical Certification Exam administered by Kentucky Office of Mine Safety and Licensing. Includes topics of basic electricity, direct current circuits, impedance, reactance, power, electrical energy, permissibility, underground and surface law, solid-state, and national instruments and applications. Co-requisite: MNG 125. Lecture: 4.0 credit hours (60 contact hours).
Components: Lecture
Attributes: Technical

MNG 125(1) **Course ID: 005266**
Mining Electricity 1 Lab
Encompasses an elementary lab for mining technology students. Includes construction of circuits using electrical-measuring instruments in the analysis of the circuits with focus on electrical safety. Emphasizes mining electrical equipment circuits, permissibility and maintenance. Corequisite: MNG 123. Laboratory: 1.0 credits (30 contact hours).
Components: Laboratory
Attributes: Technical

MNG 150(3) **Course ID: 000587**
Mining Laws
Provides the theory, intent, construction and application of state and federal regulations pertaining to underground and surface coal mining. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MNG 160(3) **Course ID: 006646**
Elements of Underground Mining
Introduces underground mining methods, operations, and procedures. Includes topics of miners' rights, work environments, health and safety standards, roof control, mine ventilation, transportation, communication, compressed gas cylinders, explosives, mine gases and instruments, electrical hazards, accident prevention, and emergency procedures. Co-requisite: MNG 161. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Pilot Course, Technical

MNG 161(1) **Course ID: 006647**
Elements of Underground Mining Lab
Applies the principles and policies of mining methods, operations, and procedures in a controlled laboratory environment. Focuses on the skills associated with the information taught in the paired underground mining lecture course. Co-requisite: MNG 160. Lab: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: Pilot Course, Technical

MNG 170(2) **Course ID: 006648**
Elements of Surface Mining
Introduces study of surface mining methods, operations, and procedures. Includes topics of miners' rights, work environments, ground control, health and safety standards, transportation, communication, compressed gas cylinders, explosives, mine gases and instruments, electrical hazards, accident prevention, and emergency procedures. Co-requisite: MNG 171. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Pilot Course, Technical

MNG 171(1) **Course ID: 006649**
Elements of Surface Mining Lab
Applies the principles and policies of mining methods, operations, and procedures in a controlled laboratory environment. Focuses on the skills associated with the information taught in the paired lecture course for surface mining. Co-requisite: MNG 170. Lab: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: Pilot Course, Technical

MNG 180(3) **Course ID: 006789**
Environmental Issues in Mining
Introduces topic of how underground and surface mining operations impact the environment in a multitude of ways. Includes basic information related to geological formations in mining and structure of coal material. Relates methods to mitigate negative effects of mining. Discusses methods to repair damage to environment. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MNG 185(3) **Course ID: 007371**
Mining Permissibility
Covers the requirements of federal and state law of mining permissibility with a focus on proper methods of checking and maintaining underground permissible equipment in a permissible condition. Includes plane flange joints, step flange joints, slip joints, threaded joints, restraining of cables, power centers, fire extinguishers, cables, and other areas of permissibility. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

MNG 190(3) **Course ID: 005206**
Mine Emergency Technician
Applies principles and procedures to identify and treat life threatening conditions. Offers safety training needed to receive a Mine Emergency Technician certificate from Kentucky Department of Mines and Minerals after successful completion of the optional test. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MNG 265(3) **Course ID: 015854**
Mining Methods
Introduces underground and surface mining methods and practices in coal and hard rock mines. Includes topics in method classification; support, safety and equipment requirements; general mine planning; sequence of development, cycle of operations and method application and variation. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MNG 274(3) **Course ID: 000722**
Mine Safety
Introduces mine safety, program organization, safety training, mine rescue operations, and the role of state and federal governments in mine safety. Includes field trips as an integral part of the course. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MNG 286(3) **Course ID: 000738**
Roof Control and Ventilation
Involves an in-depth study of roof and rib control, and coal mine ventilation. Includes methods of inspection and reporting potential safety hazards, reading roof control plans, processes and procedures involving mine resistance, law, and minimum standards. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MNG 299(1 - 4) **Course ID: 006790**
Selected Topics in Mining Technology: (Topic)
Addresses various mining technology topics, issues and trends. Includes topics that may vary from semester to semester at the discretion of the instructors; course may be repeated with different topics to a maximum of four credit hours. Lecture/Lab: 1.0 - 4.0 credits (contact hours 15 - 120).
Components: Lecture
Attributes: Technical

MOR Medical Office Radiology

MOR 100(6) **Course ID: 001773**
Medical Office Limited Radiography
Provides knowledge and lab experience necessary to meet requirements for Limited Medical Radiography licensure. Consists of patient care and management, radiographic procedures, image production and evaluation, equipment operation and maintenance. Prerequisite: AHS 109 and AHS 115 with a grade of "C" or better. Co-requisite: MOR 115. Lecture: 4.0 credits (60 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MOR 115(3) **Course ID: 001775**
Medical Office Limited Radiography Clinical
Apply the principles and procedures learned to afford the student the opportunity to observe, assist, and perform diagnostic radiographic examinations. Mandated by the State Radiation Control Board, the student shall accrue a total of 360 contact hours and perform the minimum of (50) radiographic examinations in each of the following areas: Chest, Extremities, and Musculoskeletal. Pre-requisite: AHS 109 and AHS 115 with a grade of "C" or better. Co-requisite: MOR 100 Medical Office Limited Radiography. Clinical: 3.0 credits (180 contact hours).
Components: Clinical
Attributes: Technical

MOR 117(6) **Course ID: 007111**
Advanced Medical Office Radiography
Provides knowledge and lab experience necessary to meet requirements for Limited Medical Radiography licensure. Consists of patient care and management, radiographic procedures, image production and evaluation, equipment operation and maintenance. Prerequisite: MOR 100 and MOR 115 with a grade of "C" or better. Co-requisite: MOR 119 Advanced Medical Office Radiology Clinical. Lecture: 4.0 credits (60 contact hours). Lab: 2.0 credit (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MOR 119(3) **Course ID: 007112**
Advanced Medical Office Limited Radiography Clinical
Apply the principles and procedures learned in MOR 100 and MOR 115 to afford the student the opportunity to observe, assist, and perform diagnostic radiographic examinations. Mandated by the State Radiation Control Board, the student shall accrue a total of 360 contact hours and perform the minimum of (50) radiographic examinations in each of the following areas: Chest, Extremities, and Musculoskeletal. Pre-requisite: MOR 100 and MOR 115 with a grade of "C" or better. Co-requisite: MOR 117 Advanced Medical Office Radiology. Clinical: 3.0 credits (180 contact hours).
Components: Clinical
Attributes: Technical

MRN Marine Technology

MRN 100(3) **Course ID: 006705**
Intro to Marine Technology
Provides fundamental concepts of nautical science expected of personnel working aboard an inland towing vessel. Includes basic terminology, types of equipment encountered aboard the vessel, skill sets needed in day-to-day operations, and a general knowledge of towboat operations. Pre-requisite: Instructor consent. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

MRN 101(3) **Course ID: 006706**
Anatomy of a Towboat
Introduces components found on modern towboats with emphasis on an overview of all areas of the vessel from the wheelhouse to the engine room to the external components. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

MRN 102(3) **Course ID: 006707**
Basic Marine Safety
Provides an overview of risk-based decision making skills for assessing and managing marine hazards to prevent marine accidents or casualty. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

MRN 103(3) **Course ID: 007412**
Applied Marine Weather
Covers fundamental maritime weather concepts to plan safe and efficient voyages. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

MRN 104(3) **Course ID: 007413**
Marine Crew Wellness
Examines how nutrition, exercise, and disease affect the crewmembers' ability to maintain a U.S. Coast Guard license. Focuses on nutrition and exercise programs while working, and prevention of disease. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

MRN 199(6) **Course ID: 006708**
Marine Co-Op Experience I
Gives students experience in a higher level position in the marine industry. Provides compensated on-the-job work experience under the supervision of a qualified affiliate of the industry. Pre-requisite: 360 hours of river industry experience. Co-requisite: Current employment with the company providing the co-op experience. Co-Op: 6 credits (450 contact hours).
Components: Co-Op
Attributes: Technical

MRN 200(3) **Course ID: 006709**
Shipboard Deck Operations
Provides specifics of responsibilities, policies, training, safety and rigging procedures for towboat personnel. Pre-requisite: MRN 100. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MRN 201(3) **Course ID: 006710**
Rules of the Road
Provides an in-depth analysis of the United States Coast Guard (USCG) Navigation Rules with an emphasis on the history and interpretation of the rules. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MRN 202(3) **Course ID: 006711**
Piloting and Navigation
Identifies the effect of inland waterway prevailing conditions on vessels; provides instruction on locking procedures, radio telephone regulations, hydrology, and piloting skills. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MRN 203(3) **Course ID: 006712**
Environmental Protection Rules
Provides analysis of environmental regulations governing the marine industry. Explores the environmental practices of vessels on the inland waterway systems and the governing agencies which establish industry regulations. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

MRN 204(5) **Course ID: 006713**
Marine Electrical Systems
Explores and applies the theory of electricity with an emphasis on power systems, circuits, safety procedures, and maintenance measures needed to maintain electrical systems aboard towing vessels. Lecture/Lab: 5.0 credits (105 contact hours).
Components: Lecture
Attributes: Technical

MRN 205(3) **Course ID: 006714**
Marine Electrical Systems II
Explores the maintenance measures needed to maintain electrical systems aboard towing vessels on the inland river system. Pre-requisite: MRN 204. Lecture/Lab 3 credits (60 contact hours).
Components: Lecture
Attributes: Technical

MRN 206(5) **Course ID: 006715**
Marine Diesel
Introduces the operation and components of a marine diesel engine with emphasis on diesel engine theory, safety precautions, internal and external components, and contributing operation systems. Lecture/Lab: 5.0 credits (105 contact hours).
Components: Lecture
Attributes: Technical

MRN 207(3) **Course ID: 006716**
Marine Diesel II
Identifies the various systems involved in the operation of a marine diesel engine, including the application of the knowledge of diesel operation to maintenance and troubleshooting exercises. Pre-requisite: MRN 206. Lecture/Lab: 3 credits (60 contact hours).
Components: Lecture
Attributes: Technical

MRN 208(3) **Course ID: 006717**
Inland River Systems
Explores the U.S. inland waterway system and its tributaries as they relate to the inland marine industry and the movement of cargos. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MRN 212(5) **Course ID: 007414**
Marine Fluid Systems
Incorporates practical experience in fluid power theory, component identification and application, schematic reading, and basic calculations related to marine fluid systems. Lecture/Lab: 5.0 credits (105 contact hours).
Components: Lecture
Attributes: Technical

MRN 214(4) **Course ID: 007415**
Marine Refrigeration Systems
Introduces the fundamentals of refrigeration, including use of tools, test equipment, materials, environmental issues, and safety. Lecture/Lab: 4.0 credits (69 contact hours).
Components: Lecture
Attributes: Technical

MRN 299(6) **Course ID: 006720**
Marine Co-Op Experience II
Gives students further experience in a higher level position in the marine industry. Provides supervised on-the-job work experience directly in line with the students' educational objective. Pre-requisite: MRN 199. Co-requisite: Current employment with the company providing the co-op experience. Co-Op: 6 credits (450 contact hours).
Components: Co-Op
Attributes: Technical

MRN 1001(1) **Course ID: 015787**
Marine Terminology and Safety
Provides fundamental terminology and safety concepts expected of personnel working aboard an inland towing vessel. Pre-requisite: Instructor Consent. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MRN 1002(1) **Course ID: 015788**
Seamanship, Rigging, and Tows
Provides basic seamanship expected of personnel working aboard an inland towing vessel. Pre-requisite: MRN 1001. Lecture: 1.0 credit (15 contact hours).
Components: Laboratory

MRN 1003(1) **Course ID: 015789**
Marine Operations & Equipment
Introduces the responsibilities of the engineering department and systems on board an inland towing vessel. Pre-requisite: MRN 1002. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MRN 1011(1) **Course ID: 015790**
Basic Towboat Design
Introduces components found on modern towboats with emphasis on towboat design and arrangement of equipment. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MRN 1012(1) **Course ID: 015791**
Wheelhouse Equipment
Introduces basic arrangement of wheelhouse equipment and use. Pre-requisite: MRN 1011. Lecture: 1.0 credit (15 contact hours).
Components: Laboratory

MRN 1013(1) **Course ID: 015792**
Mechanical Support Systems
Introduces mechanical support equipment aboard an inland towing vessel. Pre-requisite: MRN 1012. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MRN 1021(1) **Course ID: 015793**
Marine Safety
Introduces risk-based assessment and decision making factors for marine safety on an inland marine vessel. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MRN 1022(2) **Course ID: 015794**
Marine Risk-Based Analysis
Provides analyses for assessing and managing marine hazards to prevent marine accidents or casualty. Pre-requisite: MRN 1021. Lecture: 2.0 credits (30 contact hours).
Components: Lecture

MRN 1031(1.5) **Course ID: 015795**
Weather Forecasting
Introduces weather forecasting for safe and efficient voyage. Lecture: 1.5 credits (22.5 contact hours).
Components: Lecture

MRN 1032(1.5) **Course ID: 015796**
Maritime Weather
Introduces maritime weather as it relates to voyages. Pre-requisite: MRN 1031. Lecture: 1.5 credits (22.5 contact hours).
Components: Lecture

MRN 1041(1.5) **Course ID: 015797**
Crew Wellness
Examines how nutrition, exercise, and disease affect the crewmember's ability to maintain a U.S. Coast Guard license. Lecture: 1.5 credits (22.5 contact hours).
Components: Lecture

MRN 1042(1.5) **Course ID: 015798**
Crew Lifestyle
Focuses on nutrition and exercise programs while working and the prevention of disease. Pre-requisite: MRN 1041. Lecture: 1.5 credits (22.5 contact hours).
Components: Lecture

MRN 2002(1) **Course ID: 016380**
Shipboard Deck Safety
Provides specifics of training and safety for towboat personnel. Pre-requisite: MRN 2001. Lecture: 1 credit (15 contact hours).
Components: Lecture

MRN 2003(1) **Course ID: 016381**
Shipboard Deck Rigging
Provides specifics on rigging procedures for towboat personnel. Pre-requisite: MRN 2002. Lecture: 1 credit (15 contact hours).
Components: Lecture

MRN 2011(1.5) **Course ID: 016382**
History of Navigation Rules
Provides an in-depth analysis of the history and effects developmental changes have on navigational rules. Lecture: 1.5 credits (22.5 contact hours)
Components: Lecture

MRN 2021(1) **Course ID: 016384**
River Conditions
Identifies the effect of inland waterway prevailing conditions on vessels and hydrology. Lecture: 1 credit (15 contact hours).
Components: Lecture

MRN 2023(1) **Course ID: 016386**
Piloting
Provides instruction on locking procedures, radio telephone regulations and piloting skills. Pre-requisite: MRN 2022. Lecture: 1 credit (15 contact hours).
Components: Lecture

MRN 2031(1) **Course ID: 015799**
Environmental Regulations I
Provides analysis of environmental regulations governing the marine industry. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MRN 2032(1) **Course ID: 015800**
Environmental Regulations II
Provides analysis of Marine Pollution Convention and the National Pollution Discharge Elimination System. Pre-requisite: MRN 2031. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MRN 2033(1) **Course ID: 015801**
Environmental Regulations III
Explores the environmental practices of vessels on the inland waterway systems and the governing agencies which establish industry regulations. Pre-requisite: MRN 2031 and MRN 2032. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MRN 2041(1.66) **Course ID: 016387**
Intro to Marine Electrical
Explores the theory of electricity with an emphasis on power systems, circuits, and safety procedures needed to maintain electrical systems aboard towing vessels. Lecture/Lab: 1.66 credits (35 contact hours).
Components: Lecture

MRN 2042(1.67) **Course ID: 016388**
Marine Electrical Application
Applies the theory of electricity with an emphasis on power systems, circuits, and maintenance measures needed to maintain electrical systems aboard towing vessels. Pre-requisite: MRN 2041. Lecture/Lab: 1.67 credits (35 contact hours).
Components: Lecture

MRN 2043(1.67) **Course ID: 016389**
Marine Electrical Hardware
Applies the theory of electricity with an emphasis on maintenance measures needed for electrical systems aboard towing vessels. Pre-requisite: MRN 2042. Lecture/Lab: 1.67 credits (35 contact hours).
Components: Lecture

MRN 2063(2) **Course ID: 016392**
Marine Diesel Theory
Introduces the operation and components of a marine diesel engine with emphasis on diesel engine theory. Pre-requisite: MRN 2062. Lecture/Lab: 2 credits (45 contact hours).
Components: Lecture

MRN 2081(1) **Course ID: 016408**
Intro to Inland River Systems
Explores the U.S. inland waterway system and its tributaries for the lower Mississippi river region as they relate to the inland marine industry and the movement of cargos. Lecture: 1 credit (15 contact hours).
Components: Lecture

MRN 2082(1) **Course ID: 016410**
Upper Mississippi River System
Explores the U.S. inland waterway system and its tributaries for the upper Mississippi river region as they relate to the inland marine industry and the movement of cargos. Pre-requisite: MRN 2081. Lecture 1 credit (15 contact hours).
Components: Lecture

MRN 2083(1) **Course ID: 016411**
Inland River Systems
Explores the U.S. inland waterway system and its tributaries for the Ohio River region as they relate to the inland marine industry and the movement of cargos. Pre-requisite: MRN 2082. Lecture: 1 credit (15 contact hours).
Components: Lecture

MRN 2121(1.66) **Course ID: 016412**
Intro to Marine Fluid Systems
Incorporates practical experience in fluid power theory and schematic reading related to fluid power systems. Lecture/Lab: 1.66 credits (35 contact hours)
Components: Lecture

MRN 2122(1.67) **Course ID: 016413**
Intro to Pneumatic Components
Incorporates practical experience in fluid power theory, component identification and application related to the marine fluid systems. Pre-requisite: MRN 2121. Lecture/Lab: 1.67 credits (35 contact hours).
Components: Lecture

MRN 2123(1.67) **Course ID: 016414**
Maintenance & Control Devices
Incorporates practical experience in fluid power theory and basic calculations related to marine fluid systems. Pre-requisite: MRN 2122. Lecture/Lab: 1.67 (35 contact hours).
Components: Lecture

MRN 2141(1) **Course ID: 016415**
Introduction to Marine HVAC
Introduces the fundamentals of refrigeration. Lecture: 1 credit (15 contact hours)
Components: Clinical

MRN 2142(1) **Course ID: 016416**
Marine HVAC Safety
Introduces refrigeration tools, test equipment, and safety. Pre-requisite: MRN 2141. Lecture: 1 credit (15 contact hours.
Components: Lecture

MSE Material Science Engineering

MSE 201(3) **Course ID: 005596**
Introduction to Materials Science
Microscopic and macroscopic structure as related to the properties of materials with engineering applications. Pre-requisite: CHE 105, MA 113. Co-requisite: MA 114. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Other, University Course (University of Kentucky)

MSG Massage Therapy

MSG 100(4) **Course ID: 003986**
Musculoskeletal Anatomy & Physiology I
Provides extensive knowledge of the skeletal system and major joint articulations and an introduction to the muscular system of the human body from beginning terminology through the study of muscle tissue and neuromuscular fundamentals. Pre-requisite or Co-requisite: (CLA131 or OST103 or AHS115). Co-requisite: MSG 125. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: Technical

MSG 110(4) **Course ID: 003987**
Musculoskeletal Anatomy and Physiology II
Details muscular interactions at major joint articulations including biomechanical concepts and muscles, joints, and innervations of the upper and lower extremities. Prerequisite: MSG 125. Pre-requisite Or Co-requisite: MSG135. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: Technical

MSG 117(4) **Course ID: 016866**
Musculoskeletal Anatomy & Physiology I
Introduces the skeletal system and major joint articulations. Integrates the skeletal system with the muscular system, beginning with basic terminology and advancing to the fundamental connection with muscle and neuromuscular tissue. Pre-requisite: AHS 115 or CLA 131 or MIT 103. Lecture/Lab: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

MSG 119(4) **Course ID: 016867**
Musculoskeletal Anatomy & Physiology II
Details muscular interactions at major joint articulations including biomechanical concepts. Expands Students' abilities to locate and affect muscles, joints, and innervations of the upper and lower extremities. Pre-requisite: MSG 119 Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

MSG 125(3) **Course ID: 003990**
Massage Techniques I
Introduces theory and technique of Swedish massage, including the history and benefits of massage, scope of practice, and performance of a one-hour full body systemic Swedish massage. Co-requisite: MSG 100. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MSG 132(3) **Course ID: 016868**
Massage Techniques I
Introduces theory and technique of Swedish Massage, including the history and benefits of massage, scope of practice, and performance of a one-hour full body systemic Swedish massage. Co-requisite: MSG 117. Lecture/Lab: 3.0 credits (105 contact hours).
Components: Lecture
Attributes: Technical

MSG 134(3) **Course ID: 016869**
Massage Techniques II
Extends students' knowledge of the skeletal system and major joint articulations. Introduces the muscular system of the human body, beginning with basic terminology and advancing through the fundamentals of muscle and neuromuscular tissues. Enhances the students' skills for delivering an improved one-hour full body therapeutic massage. Pre-requisite: MSG 132. Lecture/Lab: 3 credits (105 contact hours).
Components: Lecture
Attributes: Technical

MSG 135(3) **Course ID: 003991**
Massage Techniques II
Provides extensive knowledge of the skeletal system and major joint articulations and an introduction to the muscular system of the human body from beginning terminology through the study of muscle tissue and neuromuscular fundamentals. Prerequisite: MSG 100 and MSG 125. Lecture: 1.0 credit (15 contact); Lab: 2.0 credits (60 contact).
Components: Laboratory, Lecture
Attributes: Technical

MSG 205(3) **Course ID: 005521**
Advanced Clinical Massage I
Prepares the student in the knowledge and skills of advanced massage techniques and integrating them in a medical atmosphere. Co-requisite: MSG110. Lecture: 1.0 credit (15 contact hours). Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MSG 210(3) **Course ID: 005526**
Advanced Clinical Massage II
Prepares students to integrate their massage practice into a clinical setting of rehabilitation of orthopedic conditions and injuries. Includes patient assessment, advanced orthopedics, and rehabilitative and preventative massage techniques. Pre-requisite: MSG205. Lecture: 1.0 credit (15 contact hours). Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MSG 215(2) **Course ID: 003993**
Massage Therapy Student Clinic
Applies principles and techniques by providing students with experience through a student massage clinic. Co-requisite: MSG 210. Lab: 2.0 credits (90 contacts hours).
Components: Laboratory
Attributes: Technical

MSG 220(3) **Course ID: 005522**
Massage Therapy Pathology
Prepares students to recognize and know common pathologies that they may encounter as a massage therapist. Covers pathologies directly linked to the biological systems of the body. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MSG 232(3) **Course ID: 016870**
Advanced Clinical Massage I
Prepares the student to integrate the knowledge and skills of advanced massage techniques into a clinical setting. Pre-requisite: MSG 134. Lecture/Lab: 3.0 credits (105 contact hours).
Components: Lecture
Attributes: Technical

MSG 234(3) **Course ID: 016873**
Advanced Clinical Massage II
Prepares students to integrate their massage practice into a clinical setting, including the rehabilitation of orthopedic conditions and injuries. Expands the students' involvement in patient assessment, advanced orthopedics, and the use of rehabilitative and preventative massage techniques. Pre-requisite or Co-requisite: MSG 232. Lecture/Lab: 3.0 credits (105 contact hours).
Components: Lecture
Attributes: Technical

MSG 286(3) **Course ID: 016874**
Massage Therapy Student Clinic
Enhances the students' experiences in the operation of a Massage Therapy business by their active participation in all aspects of a student-run business, including marketing, managing schedules and resources, and performing Massage services. Pre-requisite: MSG 134. Lecture/Lab: 3.0 credits (135 contact hours).
Components: Lecture
Attributes: Technical

MSG 287(1 - 6) **Course ID: 016249**
Massage Therapy Practicum and Special Topics: (Topics)
This course addresses various massage therapy topics, issues, and trends. It also allows students to practice techniques already acquired, and to demonstrate mastery of new ones covered in the topics portion. Topics may vary from semester to semester at the discretion of the instructors: course may be repeated with different topics to a maximum of six credit hours. Pre-requisite: Massage Therapy Certificate. Practicum: 1-6 credits (60-360 contact hours).
Components: Practicum
Attributes: Technical

MST Manufacturing Systems Technology

MST 150(9) **Course ID: 007288**
Multi-Skilled Systems Technician
Introduces the systems approach to the operation of electrical components and the relationship of voltage, current, resistance, and power in industrial systems. Provides an overview of alternating and direct current fundamentals. Introduces the systems approach to the operation of mechanical components and the relationship of their application in industrial systems. Provides an overview of rotating machinery fundamentals. Introduces the systems approach to the operation of hydraulic / pneumatic components and the relationship of their application in industrial systems. Provides an overview of digital fundamentals. Lecture/Lab: 9.0 credits (180 contact hours).
Components: Lecture
Attributes: Technical

MST 200(3) **Course ID: 001778**
Advanced Hydraulic Systems
The advanced hydraulic systems class will cover design, repair, and troubleshooting of hydraulic systems. Prerequisite: FPX 100, FPX 101
Components: Lecture
Attributes: Technical

MST 201(2) **Course ID: 001779**
Advanced Hydraulic Systems Lab
The advanced hydraulic systems lab will cover design, repair, and troubleshooting of hydraulic systems. Prerequisite: FPX 100, FPX101
Components: Laboratory
Attributes: Technical

MST 204(3) **Course ID: 001780**
Advanced Pneumatic Systems
Design, repair, and troubleshooting of pneumatic systems will be covered in this course. Prerequisite: FPX 100, FPX 101
Components: Lecture
Attributes: Technical

MST 205(2) **Course ID: 001781**
Advanced Pneumatic Systems Lab
Component repair and system troubleshooting will be covered in this lab. Prerequisite: FPX 100, FPX 101
Components: Laboratory
Attributes: Technical

MST 206(3) **Course ID: 005259**
Electrohydraulics
Introduces electronic/electrical controls as it pertains to hydraulic valve control with the emphasis on automation, robotic and servo control. Lecture: 3 credits (45 contact hours). Prerequisite: (ENGT 110 and FPX 100) or Consent of Instructor. Corequisite: MST 207.
Components: Lecture
Attributes: Technical

MST 207(2) **Course ID: 005260**
Electrohydraulics Lab
Introduces electronic/electrical controls as it pertains to hydraulic valve control with the emphasis on automation, robotic and servo control. Laboratory: 2 credits (90 contact hours). Prerequisite: (ENGT 111 and ENGT 113 and FPX 101) or Consent of Instructor. Corequisite: MST 206.
Components: Laboratory
Attributes: Technical

MSY Masonry

MSY 105(3) **Course ID: 001655**
Introductory Masonry
Introduces various types of mortar and cement along with the use of basic masonry tools. Emphasizes different methods of spacing materials on a construction site, the 6-8-10 method, and use of the transit level, brick spacing and modular rule focusing on laying straight and plumb brick to the line, bricking gables and building columns. Covers application techniques for setting up different types of masonry materials, marking off layout lines and erecting batter boards along with techniques employed in different types of weather and climates. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 115(3) **Course ID: 001656**
Intermediate Masonry
Builds on proficiency in competencies learned in MSY 105. Focuses on laying straight and plumb brick to the line with emphasis on bricking gables and building columns. Prerequisite: MSY 105 with a grade of "C" or higher or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 198(3) **Course ID: 001657**

Instructor Consent Required
Practicum I
Provides supervised on-the-job work experience related to the students educational objectives. Students participating in the Practicum do not receive compensation. Prerequisite: Consent of Instructor. Practicum: 3.0 credits (90 contact hours).
Components: Practicum
Attributes: Technical

MSY 199(3) **Course ID: 001658**

Instructor Consent Required
Cooperative Education I
Provides supervised on-the-job work experience related to the student's educational objectives. Students participating in the Co-op Education program receive compensation for their work. Prerequisite: Consent of Instructor. Co-Op: 3.0credits (90 contact hours).
Components: Co-Op
Attributes: Technical

MSY 205(3) **Course ID: 001660**
Advanced Masonry
Provides experience in laying quoin corners, bricking in around electrical and plumbing units, and laying door and window brick sills. Provides opportunity for students to construct expansion joints, piers, pilasters and retaining and splitface block walls. Prerequisite: [(MSY 105 and MSY 115 with a grade of "C" or higher] or Consent of Instructor. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 215(3) **Course ID: 001661**
Masonry Lab
Provides for practice and application of principles, theories and skills taught in MSY 105, MSY 115, MSY 205. Prerequisite: [(MSY 105 and MSY 115 and MSY 205) with a grade of "C" or higher] or Consent of Instructor. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 225(3) **Course ID: 001662**
Brick Construction
Covers the application of laying brick to a line overhand, laying a rowlock course, and making weep holes. Emphasizes tying intersecting walls with masonry ties and construction cavity walls and planters. Prerequisite: MSY 205 with a grade of "C" or higher or Consent of Instructor. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 235(3) **Course ID: 001663**
Special Techniques in Brick Construction
Provides practice in constructing a variety of walls including arches. Prerequisite: MSY 205 with a grade of "C" or higher or Consent of Instructor. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 245(3) **Course ID: 001664**
Anchors and Reinforcement
Presents different types of reinforcement used in masonry units such as installing wall ties and reinforcing wire, tying intersecting walls with metal ties, installing masonry anchor bolts, setting and anchoring door and window frames, and setting steel lintels and bearing plates. Covers the installation of dovetail ties to concrete, setting preformed masonry lintels, and laying of paving brick in a herringbone pattern. Prerequisite: MSY 105 with a grade of "C" or higher or Consent of Instructor. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 251(3) **Course ID: 001665**
Concrete Finishing
Focuses on theory and techniques inherent in the art of concrete finishing. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 253(3) **Course ID: 001666**
Masonry Floors and Steps
Provides students with the opportunity to lay paving brick, steps, and flagstone floors including laying different types of patterns. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 255(3) **Course ID: 001667**
Glass Blocks and Tile
Provides students with the opportunity to lay structural clay tile, glazed tile, glass block, and set coping tile. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 257(3) **Course ID: 001668**
Stone
Includes identifying the types of stone and the different types of bonds used in stone masonry. Prerequisite: MSY 105 with a grade of "C" or higher or Consent of Instructor. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 275(3) **Course ID: 001669**
Fireplace Construction
Presents different types and styles of indoor and outdoor fireplaces, and the principles of layout, drafting and drawing a fireplace. Includes finishing dimensions of fireplace opening, firebox layout, setting the flue lining, and applying a chimney cap. Prerequisite: MSY 205 with a grade of "C" or higher or Consent of Instructor. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 291(1 - 3) **Course ID: 001670**
Masonry Applications
Provides students with additional opportunity to refine skills. Lab: 1.0 - 3.0 credits (45-135 contact hours).
Components: Laboratory
Attributes: Technical

MSY 298(3) **Course ID: 001671**
Instructor Consent Required
Practicum II
Provides additional supervised on-the-job work experience related to the student's educational objectives. Students participating in the Practicum do not receive compensation. Prerequisite: Consent of Instructor. Practicum: 3.0 credits (90 contact hours).
Components: Practicum
Attributes: Technical

MSY 299(3) **Course ID: 001672**
Instructor Consent Required
Cooperative Education II
Provides additional supervised on-the-job work experience related to the student's educational objectives. Students participating in the Co-op Education program receive compensation for their work. Prerequisite: Consent of Instructor. Co-op: 3.0 credits (90 contact hours).
Components: Co-Op
Attributes: Technical

MTT Machine Tool Technology

MTT 216(8) **Course ID: 005456**
Machining Techniques for Manufacturing
Provides skills and knowledge needed to progress through the Tool and Die program. Includes safety, bench work and machining operations performed on die and mold applications. Lecture: 1 credit (15 contact hours). Laboratory: 7 credits (210 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

MU Music

MU 101(3) **Course ID: 000910**
Folk and Traditional Music of the Western Continents
Designed for non-music majors. The primary purpose of the course is to survey the body of music called ethnic, folk, or 'traditional,' as it is found in Europe, most of Africa, and the Americas, from a geographic approach. Lecture: 3 hours.
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

MUC Class Instruction in Music

MUC 175(1) **Course ID: 002238**
Instructor Consent Required
Jazz Ensemble
The study of jazz performance technique and jazz literature through the participation in a jazz ensemble. Can be repeated for a total of 4 credits. Laboratory: 1 credit (3 contact hours). Prerequisite: Consent of instructor.
Components: Laboratory
Attributes: Technical, University Course (University of Kentucky)

MUC 190(1) **Course ID: 005593**
Instructor Consent Required
Marching Band
Preparation for and performance at university athletic functions, primarily football games. May be repeated to a maximum of four credits. Prerequisite: Audition and permission of the instructor. Lab: 1 credit (45 contact hours).
Components: Laboratory
Attributes: Other, University Course (University of Kentucky)

MUP Music Performance

MUP 101(1 - 3) **Course ID: 002242**
Instructor Consent Required
Piano
Students enrolled in MUP courses for two or more credit hours may be required to attend performance classes as well as lessons. Prerequisite: Satisfactory audition and/or approval of instructor.
Components: Laboratory
Attributes: Other

MUP 102(1 - 3) **Course ID: 002243**
Instructor Consent Required
Voice
Students enrolled in MUP courses for two or more credit hours may be required to attend performance classes as well as lessons. Prerequisite: Satisfactory audition and/or approval of instructor.
Components: Laboratory
Attributes: Other

MUP 114(1 - 3) **Course ID: 006459**
Instructor Consent Required
Trombone I
Provides a systematic study of trombone performance. May be repeated for a total of 3 credits. Laboratory: 1.0 - 3.0 credits (7.5 - 22.5 contact hours). Prerequisite: Consent of instructor
Components: Laboratory
Attributes: University Course (University of Kentucky)

MUP 123(1 - 3) **Course ID: 002245**
Instructor Consent Required
Classical Guitar
Students enrolled in MUP courses for two or more credit hours may be required to attend performance classes as well as lessons. Prerequisite: Satisfactory audition and/or approval of instructor.
Components: Laboratory
Attributes: Other

MUP 201(1 - 3) **Course ID: 002246**
Instructor Consent Required
Piano
Students enrolled in MUP courses for two or more credit hours may be required to attend performance classes as well as lessons. Prerequisite: Satisfactory audition and/or approval of instructor.
Components: Laboratory
Attributes: Other

MUP 202(1 - 3) **Course ID: 002247**
Instructor Consent Required
Voice
Students enrolled in MUP courses for two or more credit hours may be required to attend performance classes as well as lessons. Prerequisite: Satisfactory audition and/or approval of instructor.
Components: Laboratory
Attributes: Other

MUP 214(1 - 3) **Course ID: 006460**
Instructor Consent Required
Trombone II
Continues the systematic study of trombone performance through an individualized course of study. May be repeated for a total of 3 credits. Prerequisite: Consent of Instructor. Laboratory: 1.0 - 3.0 credits (7.5 - 22.5 contact hours).
Components: Laboratory
Attributes: University Course (University of Kentucky)

MUP 223(1 - 3) **Course ID: 003978**
Instructor Consent Required
Classical Guitar (Second Level)
Students enrolled in MUP courses for two or more credit hours may be required to attend performance classes as well as lessons. Prerequisite: Satisfactory audition and/or approval of instructor.
Components: Laboratory
Attributes: Other

MUS Music

MUS 100(3) **Course ID: 000883**
Introduction to Music
Introduces the elements of music as they apply to the listening experience. Emphasizes the development of an awareness and understanding of musical styles from the Middle Ages to the present. Designed for the non-music major with no prior knowledge of music and is not intended to fulfill a program course requirement for music majors.
Components: Lecture
Attributes: AH - Arts and Humanities, Course Also Offered in Modules

MUS 104(3) **Course ID: 004548**
Introduction to Jazz History
A survey of the many facets of jazz music. Designed to follow stylistic trends as developed from 19th century African and European influences to the modern forms of today. The study of significant composers, performers, and terminology associated with this uniquely American art form through listening assignments, reading and discussion activities. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

MUS 106(3) **Course ID: 006188**
Music in Film
Presents a survey of the history of film from the silent era to the present. Develops critical listening, viewing, and analytical skills in relation to the function of music in film. Explores various cultural, artistic traditions which inform the musical styles in film. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, University Course (Morehead State University)

MUS 113(1) **Course ID: 006900**
Class Instruction in Guitar I
Introduces the fundamentals of guitar playing to beginners. Lab: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: Other, Pilot Course

MUS 114(1) **Course ID: 006899**
Class Instruction in Guitar II
Develops the fundamentals of guitar playing on an intermediate level. Pre-requisite: Guitar I or consent of instructor. Lab: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: Other, Pilot Course

MUS 120(3) **Course ID: 004609**
Music Technology I
Introduces the use of technology as a tool for music creativity and productivity. Includes knowledge of how to create various styles of contemporary music utilizing loop and sampling based technology, creation of wav files, MP3 files, CD layout, and class projects. Prerequisite: MUS 174 or Consent of Instructor. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Other

MUS 121(3) **Course ID: 004610**
Music Technology II
Continues the process of integrating computer based technology into the creation and design of music through artistic and commercial applications. Covers intermediate skills in music notation, MIDI (Musical Instrument, Digital Interface) sequencing, and electronic keyboarding. Includes the exploration of many ways to incorporate these skills into computer/MIDI applications. Prerequisite: MUS 120 or consent of the instructor. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Other

MUS 150(1) **Course ID: 002231**
Class Instruction in Piano I
Introduces the fundamentals of piano playing to beginners. Lab: 1.0 credit (30 contact hours)
Components: Laboratory
Attributes: Other

MUS 151(1) **Course ID: 002232**
Class Instruction in Piano II
Develops the fundamentals of piano playing on a second level, with advanced beginner music and technique. Prerequisite: MUS150. Lab: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: Other

MUS 152(1) **Course ID: 002233**
Class Instruction in Piano III
Develops the fundamentals of piano playing on an early intermediate level, with an emphasis on expanded repertoire. Prerequisite: MUS 151. Lab: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: Other

MUS 153(1) **Course ID: 002234**
Class Instruction in Piano IV
Develops the technique and musical content of piano playing on an upper intermediate level, with an emphasis on upper intermediate repertoire. Prerequisite: MUS152. Lab: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: Other

MUS 155(1) **Course ID: 002235**
Instructor Consent Required
Voice Class for Non-Music Majors
Includes applied voice group instruction for non-music majors with emphasis on basic breathing and vocal technique, elements of music notation, and diction. May be repeated for a maximum of 2 credits. Prerequisite: Consent of instructor. Lab: 1 credit (15 contact hours).
Components: Laboratory
Attributes: Other

MUS 174(3) **Course ID: 002249**
Theory for Nonmusic Majors
Introduces basic materials of musical organization, focusing on music reading, rudiments of notation, pitch, scale, tonal, and rhythmic organization, melodic construction, simple harmonic vocabulary, and beginning aural training. Uses individual composition and improvisation exercises to approach much of this material. Ability to read music is not a pre-requisite.
Components: Lecture
Attributes: Other

MUS 175(1) **Course ID: 006791**
Instructor Consent Required
Jazz Ensemble
Introduces the study of jazz through performance and may be repeated to a maximum of four credits. Pre-requisite: Consent of Instructor. Lab: 1.0 credit (45 contact hours).
Components: Laboratory
Attributes: Other

MUS 187(1) **Course ID: 002239**
Instructor Consent Required
Concert Band
Continues instrumental music experience through participation in a large concert band. May be repeated to a maximum of four credits. Prerequisite: Ability to read music and play a band instrument.
Components: Laboratory
Attributes: Other

MUS 192(1) **Course ID: 002237**
Instructor Consent Required
University Chorus
Includes choral literature and performance requiring attendance at up to five hour of rehearsals per week. May be repeated up to 3 times for a total of 4 credits. May require audition and/or consent of instructor. Prerequisite: Audition and consent of instructor. Lab: 1 credit (15-45 contact hours).
Components: Laboratory
Attributes: Other

MUS 206(3) **Course ID: 000857**
American Music History
Includes a history of music in America from c. 1620 to the present. Requires listening to recordings, reading the primary text and suggested readings in books, periodicals, and documents. Focuses on important names, places, events, and styles in music, as well as important historical trends and movements.
Components: Lecture
Attributes: AH - Arts and Humanities

MUS 207(3) **Course ID: 004774**
African American Music History
A history of African American music from Pre-colonial West African diasporas through American colonial times to the present. Requires listening to recordings, reading the primary text and suggested readings in books and periodicals. Important names, places, events, and styles in music, as well as important historical and sociological trends will be presented within the context of the African American experience. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

MUS 208(3) **Course ID: 004775**
World Music
A geographic survey of selected music cultures throughout the world with hands-on experience playing the music of diverse cultures, audio/video examples of music-cultures in performances, reading and writing assignments, and attendance and reporting at live music events. Includes informational presentations by students, group listening and discussion, simple musical instrument construction, and small group projects. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

MUS 222(3) **Course ID: 002253**
History and Sociology of Rock Music
Provides a listening survey course, with a chronological approach, covering the years 1950- present. Emphasizes both the music and the sociological climate reflected and advocated by the music. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

MUS 223(3) **Course ID: 006581**
Music for Elementary Teachers
Covers music rudiments of music theory and methods for teaching music to elementary school children. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Other

MUS 260(2) **Course ID: 000692**
Teaching Music in the Elementary Grades I
Develops musicianship, skills, and techniques teachers need to direct musical activities effectively in the elementary classroom. Introduces music fundamentals and teaching materials through active participation in musical activities, focusing on music education appropriate for elementary grades. Should be taken by classroom teachers and non-music majors and followed by MUS 261. Lecture/Lab: 2 credits (45 contact hours).
Components: Lecture
Attributes: Other

MUS 261(2) **Course ID: 000699**
Teaching Music in the Elementary Grades II
Builds on the musicianship skills and techniques learned in MUS 260. Develops the process of selecting and teaching musical materials appropriate for elementary-aged children. Introduces methods of integrating music across the elementary curriculum. Should be taken immediately following completion of MUS 260. Prerequisite: MUS 260. Lecture/Lab: 2 credits (45 contact hours).
Components: Lecture
Attributes: Other

MUS 299(1 - 3) **Course ID: 006343**
Special Topics in Music
Examines selected topics in music and/or their impact on culture. May include but is not limited to individual composers, music genres, defined eras, and applied skills. Topics may vary from semester to semester at the discretion of the instructor. Prerequisite: MUS 100 or consent of the instructor. Lecture: 1-3 credits (15-45 contact hours).
Components: Lecture
Attributes: Other

MUS 1001(1) **Course ID: 015802**
Elements through Renaissance
Introduces the elements of music as they apply to the listening experience. Emphasizes the development of an awareness and understanding of musical styles from the Middle Ages and Renaissance. Designed for the non-music major with no prior knowledge of music and is not intended to fulfill a program course requirement for music majors. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MUS 1002(1) **Course ID: 015803**
Baroque & Classical Music
Emphasizes the development of an awareness and understanding of musical styles from the Baroque and Classical Periods. Pre-requisite: MUS 1001 Elements Through Renaissance. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MUS 1003(1) **Course ID: 015804**
Romantic 21st Century Music
Emphasizes the development of an awareness and understanding of musical styles from the Romantic Period through 21st Century Music. Pre-requisite: MUS 1002 Baroque & Classical Music. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MUSE Music (Education)

MUSE 222(3) **Course ID: 006665**
Music for the Elementary Teachers
Music rudiments of music theory and methods for teaching music to elementary school children.
Components: Lecture
Attributes: University Course (Morehead State University)

MVC Metroversity

MVC 299(1 - 8) **Course ID: 005317**
Metroversity Topics
Includes Special Topics for the Metroversity Consortium (Jefferson Community & Technical College, Bellarmine University, Indiana University Southeast, IVY Tech Community College, Louisville Presbyterian Theological Seminary, Southern Baptist Theological Seminary, Spalding University, and University of Louisville). Specific course descriptions, outlines, and competencies will be on file at the credit-bearing institution. GPA 2.0 and completion of 12 credit hours in KCTCS required. Lecture/Lab: 1-8 credit hours.
Components: Laboratory, Lecture
Attributes: Other

NAA Nursing Assistant

NAA 100(3) **Course ID: 004611**
Nursing Assistant Skills I
Provides knowledge and skills for nurse aides to assume the role and responsibility required in a long term care setting. The focus is communication, infection control, safety, resident/patient rights, and basic nursing skills. Note: Faculty and clinical sites must comply with applicable Federal and Kentucky laws and regulations including but not limited to 42 USC 1396r and 907 KAR 1:450.
Components: Lecture
Course Equivalents: MNA 100
Attributes: Course Also Offered in Modules, Technical

NAA 102(3) **Course ID: 006887**
Basic Health Unit Coordinating
Presents the duties and responsibilities of the health unit coordinator with an emphasis on communication skills, confidentiality, legal and ethical issues, and order entry. Lecture 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Pilot Course, Technical

NAA 115(3) **Course ID: 004612**
Nursing Assistant II
Provides knowledge and skills for nurse aides to assume the role and responsibility required in a variety of health care settings. Builds upon MNA 100/NAA 100 and prepares the student to perform advanced nursing assistant skills. Prerequisite: ((MNA 100 or NAA 100) with a grade of "C" or above within one year) or Active Status on the Kentucky Nurse Aide Registry (in good standing)) or consent of instructor. Lecture: 2.0 credits (30 contact hours) Lab: 1.0 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

NAA 125(6) **Course ID: 004613**
Advanced Nursing Assistant
Provides knowledge and skills for nurse aides to assume the role and responsibility required in a variety of health care settings. Focuses on communication, infection control, safety, resident/patient rights while preparing the student to perform advanced nursing assistant skills. Note: Faculty and clinical sites must comply with applicable Federal and Kentucky laws and regulations including but not limited to 42 USC 1396r and 907 KAR 1:450. Lecture/Lab: 6.0 credits (150 contact hours).
Components: Lecture
Attributes: Technical

NAA 1001(2) **Course ID: 006250**
Long Term Care Nurse Aide
Provides knowledge and skills for nurse aides to assume the role and responsibility required in a long term care setting. Focuses on communication, infection control, safety, resident/patient rights, and basic nursing skills. Note: Faculty and clinical sites must comply with applicable Federal and Kentucky laws and regulations including but not limited to 42 USC 1396r and 907 KAR 1:450. Lecture: 2.0 credits (30.0 contact hours).
Components: Lecture

NAA 1002(0.56) **Course ID: 006251**
Nurse Aide Skills Laboratory
Includes the laboratory component for application of skills and concepts taught in the nurse aide program. Prerequisite: NAA 1001. Lab: .56credit (25.0 contact hours).
Components: Laboratory

NAA 1003(0.44) **Course ID: 006252**
Nurse Aide Clinical Rotation
Includes the required supervised practical training component. Provides a working knowledge of the physiological, psychological, and sociological impact of institutionalization on the nursing facility resident. Prerequisite: NAA 1002. Clinical: 0.44 credit (20 contact hours).
Components: Clinical

NAA 1021(1) **Course ID: 016419**
Health Unit Coordinating
Presents communication skills and safety duties and responsibilities of the health unit coordinator. Lecture: 1 credit (15 contact hours).
Components: Lecture

NAA 1022(1) **Course ID: 016420**
Health Unit Management
Presents health unit coordinator duties and responsibilities regarding confidentiality and legal and ethical issues. Pre-requisite: NAA 1021 Lecture: 1 credit (15 contact hours).
Components: Lecture

NAA 1023(1) **Course ID: 016421**
Transcription of Orders
Presents order entry duties and responsibilities of the health unit coordinator. Pre-requisites: NAA 1022. Lecture: 1 credit (15 contact hours).
Components: Lecture

NFS Nutrition and Food Science

NFS 101(3) **Course ID: 000898**
Human Nutrition and Wellness
Food composition, digestion, absorption, and metabolism as related to selection of nutrients essential for human life, growth, reproduction, lactation, wellness, and physical activity. Not open to NFS majors except hospitality management students.
Components: Lecture
Attributes: Other

NGT Natural Gas Technology

NGT 125(1) **Course ID: 005024**
Compliance With National Fuel Gas Code
A continuance of safety information unique to the natural gas industry. Emphasis is placed on effective ways to avoid accidents and injuries at the worksite. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical

NGT 130(1) **Course ID: 005025**
Compliance With Code of Federal Regulations
A survey of the criteria for the installation, maintenance and inspection of gas pipelines up to the outlet of the customers meter. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical

NGT 210(3) **Course ID: 005032**
Troubleshooting Cathodic Protection Rectifiers
Presents the electrical circuits basic to protection current rectifiers. Lecture: 2 credit (30 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

NGT 1001(0.25) **Course ID: 006446**
Basic Procedures/Processes
Presents the major components of a natural gas system from well head to burner. Presents actions that each component has on the gas stream in the context of the total system. Reviews key terms and definitions applied to conditions common to the utilization of natural gas. Lecture: 0.25 credits (3.75 contact hours).
Components: Lecture

NGT 1002(0.25) **Course ID: 006447**
Basic Properties of Fuel Gases
Presents advanced procedures for extracting natural gas from the earth and for transporting and regulating natural gas with an emphasis on the physical and chemical properties of natural fuel gases. Lecture: 0.25 credits (3.75 contact hours).
Components: Lecture

NGT 1003(0.75) **Course ID: 006448**
Adjusting Gas Burners
Presents the science of gas burner design, factors affecting the proper combustion of fuel gas, and techniques used to measure gas input rates, gas flow, and pressure. Lecture: 0.25 credits (3.75 contact hours); Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 1004(0.75) **Course ID: 006449**
Regulating Natural Gas
Presents factors related to measurement of natural gas in a distribution system, pressure regulation, accurate measurement of natural gas, and irregularities in meter installations. Lecture: 0.25 credits (3.75 contact hours); Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 1005(0.5) **Course ID: 006450**
Gas Distribution Calculations
Presents methods for calculating area and volume measurements, gas flow rate measurements and heating values, venting and ventilation requirements for proper burning of natural gas, and comparing fuel costs.
Components: Lecture

NGT 1006(0.5) **Course ID: 006451**
Records & Compliance Reports
Focuses on U.S. Department of Transportation reporting requirements, reading maps of natural gas systems, and preparing field sketches. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 1101(1.25) **Course ID: 006452**
Controlling/Preventing Fires
Introduces factors related to the fire extinguishing process, ways to prevent gas fires, and ways to extinguish natural gas fires. Lecture: 0.25 credits (3.75 contact hours); Lab: 1.0 credits (30 Contact hours).
Components: Laboratory, Lecture

NGT 1102(0.75) **Course ID: 006461**
Safe Working Environment
Emphasizes work safety practices, proper use of equipment, hazards of escaping gas, and drug testing and rehabilitation programs. Lecture: 0.25 credits (3.75 contact hours), Laboratory: 0.5 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 1103(0.5) **Course ID: 006462**
Preventing Accidental Ignition
Identifies conditions, causes, and hazards related to gas leakage; emphasizes safety practices and procedures to prevent accidental ignition of natural gas. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1104(0.5 - 500) **Course ID: 006463**
Traffic Control Guidelines
Present the basic standard for traffic control as described in the annual on Uniform Traffic Control Devices, Part VI According to the U.S. Department of Transportation.
Components: Laboratory, Lecture

NGT 1401(0.5) **Course ID: 006465**
Excavating
Focuses on the Occupational Safety and Health Administration (OSHA) requirements for earth excavation, protection systems, and tables and specifications for designing protective systems. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1402(1.25) **Course ID: 006466**
Operating Equipment Safely
Presents techniques of tractor/loader/backhoe operation while emphasizing safety precautions, maintenance and inspection, and proper control. Lecture: 0.25 credits (3.75 contact hours), Lab: 1 credit hour (30 contact hours).
Components: Laboratory, Lecture

NGT 1403(0.75) **Course ID: 006467**
Safety in Confined Spaces
Introduces confined spaces with emphasis on identifying hazards, monitoring of the atmosphere, entry procedures, and controlling hazardous energy. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.5 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 1404(0.5) **Course ID: 006468**
Communicating Potential Hazard
Examines health related chemical and explosive hazards while emphasizing identification of hazard information from labels and material safety data sheets and methods used to work safely with toxic chemicals and hazardous materials. Lecture: .25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1501(0.5) **Course ID: 006453**
Gas-in-Air Mixture
Focuses on detecting the presence of and measuring the percent of gas in a gas-in-air mixture. Lecture: 0.5 credits (7.50 contact hours).
Components: Lecture

NGT 1502(0.5) **Course ID: 006454**
Gas Leaks/Odors
Presents basic facts about natural gas and natural gas leaks with emphasis on responding to gas leak and odor calls. Lecture: 0.25 credits (3.75 contact hours); Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1503(0.5) **Course ID: 006455**
Underground Facilities
Presents techniques and procedures basic to locating and marking underground pipeline facilities. Lecture: 0.25 credits (3.75 contact hours); Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1504(0.5) **Course ID: 006456**
Underground Leaks
Presents the theory and practice for investigating and pinpointing underground natural gas leaks. Lecture: 0.25 credits (3.75 contact hours); Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1505(0.75) **Course ID: 006464**
Patrol/ Leakage Surveys
Presents factors basic to patrol of pipeline facilities to include the practice of patrol and leakage surveys. Lecture: 0.5 credits (7.5 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1506(0.25) **Course ID: 006618**
Detecting Carbon Monoxide
Presents the characteristics of carbon monoxide and the guidelines for investigation of carbon monoxide. Lecture: 0.25 credits (3.75 contact hours).
Components: Lecture

NGT 1601(0.75) **Course ID: 006469**
Establishing a Gas Service
Presents methods used when establishing a gas service with emphasis piping from the main to customer's piping, piping inside buildings, and gas-operated equipment in service. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 1602(0.75) **Course ID: 006470**
Odorant Levels
Presents federal and Kentucky standards for proper odorant levels with emphasis on monitoring odorant levels. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 1603(0.75) **Course ID: 006471**
Installing Domestic Service
Presents US Department of Transportation and industry-recognized procedures for installing domestic gas service. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 1604(0.75) **Course ID: 006472**
Purging Techniques
Presents the theory and techniques common to purging natural gas lines, including safe practices and isolation of equipment during purging. Lecture 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 1701(0.5) **Course ID: 006473**
Gas-Operated Appliances
Presents procedures for checking natural gas appliance systems to ensure proper installation and safe operation. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1702(0.5) **Course ID: 006474**
Servicing Gas Equipment
Presents factors related to the ventilation process, standards to ensure proper combustion and ventilation for gas-operated equipment, and ventilation inspection of gas-operated equipment. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1703(0.75) **Course ID: 006475**
Venting Gas Equipment
Presents venting requirements for Categories I-IV gas-operated appliances; identifies features and benefits of high efficiency equipment with practice in sizing of vents and inspecting venting systems. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 1704(1.25) **Course ID: 006476**
Electrical Concepts
Presents the basis for troubleshooting electrical control circuits in gas-operated appliances with emphasis on reading electrical circuit diagrams and their physical arrangement in the appliance. Lecture: 0.25 credits (3.75 contact hours), Lab: 1 credit (30 contact hours).
Components: Laboratory, Lecture

NGT 1801(0.5) **Course ID: 006477**
Installing Mains & Lines
Presents practices basic to installing gas mains and service lines with emphasis on safety, standards, and line-marking. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours)
Components: Laboratory, Lecture

NGT 1802(0.5) **Course ID: 006478**
Pipeline Installation
Examines the preparation of the pipeline right-of-way and the completion of the construction operation; presents the major phases of the inspection process. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 1803(0.5) **Course ID: 006479**
Joining Plastic Pipe
Presents the material specifications and installation practices for polyethylene pipe, joining plastic pipe with mechanical fittings, and identification of methods to control static electricity. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1804(0.75) **Course ID: 006480**
Plastic Pipe & Heat Fusion
Presents the theory of heat fusing polyethylene pipe and the specification and conditions required to produce an acceptable joint.Lecture: 0.5 credits (7.5 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1805(0.5) **Course ID: 006481**
Permanent Field Repairs
Presents common methods and installation practices used to make field repairs on gas piping facilities and natural gas pipelines. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1806(0.25) **Course ID: 006482**
Joining Copper Pipe
Presents materials and techniques for joining copper pipe/tubing. Lecture: 0.25 credits (3.75 contact hours).
Components: Lecture

NGT 1901(0.5) **Course ID: 006483**
Maintaining Line Valves
Presents basic design characteristics and maintenance procedures for pipeline valves. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 1902(0.5) **Course ID: 006484**
Pressure Relief Valves
Presents components and operating characteristics of typical pressure relief valve installations; emphasizes spring-operated and pilot-operated pressure relief valves; focuses on factors to consider when installing pressure relief valves. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 1903(0.5) **Course ID: 006485**
Abandon/Deactivate Facilities
Presents processes and procedures for deactivating/abandoning gas facilities. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1904(0.5) **Course ID: 006486**
Cast Iron Pipe
Presents materials and procedures for repairing cast iron pipe; emphasizes protection of cast iron pipe while excavating. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1905(1) **Course ID: 006487**
Inspecting Pipe Welds
Presents duties and responsibilities basic to the practice of inspecting pipe welds; emphasizes the identification and evaluation of weld defects.Lecture: 0.5 credits (7.5 contact hours), Lab: 0.5 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 2001(0.75) **Course ID: 006488**
Tapping/Stopping Pipelines
Presents techniques used to safely tap and stop pipelines under pressure. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 2002(0.75) **Course ID: 006489**
Pipeline Pigging
Presents techniques basic to pigging pipelines. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 2003(0.75) **Course ID: 006490**
Purging Techniques
Presents factors affecting the mechanical nature of displacing one gas with another gas by purging. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 2004(0.75) **Course ID: 006491**
Tie-In/Bypass Operations
Presents procedures for performing tie-in/bypass operations. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 2051(0.5) **Course ID: 006492**
Corrosion Control
Presents the characteristics of corrosion, conditions causing corrosion in buried metal piping, and processes and procedures basic to corrosion control. Lecture: 0.25 credits (3.75 contact hours), Lab: .25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2052(0.5) **Course ID: 006493**
Installing Cathodic Systems
Presents procedures for installing cathodic protection systems. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2053(0.5) **Course ID: 006494**
Testing Corrosion Systems
Presents methods for monitoring and testing corrosion control systems. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2054(0.5) **Course ID: 006495**
Monitoring Corrosion Control
Presents information and techniques for monitoring corrosion control methods on buried metal pipelines. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits(7.5 contact hours).
Components: Laboratory, Lecture

NGT 2101(1) **Course ID: 006496**
Principles of Electricity
Presents the basics of both D.C. and A.C. electrical theory with an emphasis on current flow designs. Lecture: 1 credit (15 contact hours).
Components: Lecture

NGT 2102(1) **Course ID: 006497**
Rectifier Components
Presents the theory and practice of identifying and testing typical rectifier components with emphasis on the identification of rectifying circuits, rectifier selection methods, and specialized types of rectifiers. Lecture: 0.50 credits (7.5 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 2103(1) **Course ID: 006498**
Rectifiers
Presents information and techniques for putting cathodic protection rectifier systems into service. Lecture: 0.5 credits (7.5 contact hours) Lab: 0.5 credits (15 contact hours)
Components: Laboratory, Lecture

NGT 2201(0.5) **Course ID: 006499**
Gas Measurement
Presents concepts and principles basic to gas measurement; demonstrates the effects of gas pressure and temperature on gas measurement using mathematical calculations; reviews the operating principles of diaphragm, rotary and turbine meters used to measure gas. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 2202(1) **Course ID: 006500**
Maintaining Line Valves
Presents the basic operating principles and maintenance schedules of gas flow control valves; demonstrates proper use and care of high-pressure grease guns. Lecture: 0.5 credits (7.5 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 2203(0.5) **Course ID: 006501**
Pipeline Heaters
Presents the operation procedures and maintenance of catalytic and water bath indirect pipeline heaters. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 2204(0.5) **Course ID: 006502**
Proper Odorant Levels
Presents the industry standards and devices used to introduce odorants into a natural gas system; emphasizes testing for odorant levels and the proper handling of odorants. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2205(0.5) **Course ID: 006503**
Dew Point of a Gas
Covers theory and practice used to test the dew point of a gas; explains methods used to test moisture in gas. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2301(0.5) **Course ID: 006504**
Orifice Meters
Presents operating principles of orifice meters; emphasize the identification of the meter components and their functions in the measurement process. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 2302(0.5) **Course ID: 006505**
Turbine Meters
Presents operating principles of turbine type meters; emphasizes the identification of the meter components and their functions in the measurement process. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 2303(0.5) **Course ID: 006506**
Diaphragm Meters
Presents operating principles of diaphragm-type meters; emphasizes the identification of the meter components and their functions in the measurement process. lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2304(0.5) **Course ID: 006507**
Rotary Meters
Presents operating principles of rotary meters; emphasizes the identification of the meter components and their functions in the measurement process. Lecture 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2305(0.5) **Course ID: 006508**
Pressure Relief Valves
Presents purpose and operating characteristics of pressure relief valves; emphasizes inspecting, testing and maintenance of relief valves. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2306(0.5) **Course ID: 006509**
Recording Charts
Presents basic technology used to transfer information to a recording chart; emphasizes how to change, interpret, and send charts. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2401(0.5) **Course ID: 006510**
Self-Operating Regulators
Presents information and procedures basic to performing maintenance operations on self-operating pressure regulators. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2402(0.5) **Course ID: 006511**
Pilot Loaded Regulators
Presents concepts and principles basic to the operation and selection of pressure regulators and the control of gas pressure. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2403(0.5) **Course ID: 006512**
Test Pressure Limits
Presents the concepts and principles basic to test relief valves and pressure limiting and regulating stations. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2404(0.5) **Course ID: 006513**
Differential Pressure Recorder
Presents information and procedures for maintaining and calibrating differential pressure recorders. lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 2405(0.5) **Course ID: 006514**
Mercury Instruments
Presents the fundamental operating and maintenance procedures for Mercury instruments, gauges and indexes. lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 2406(0.5) **Course ID: 006515**
Multiple Range Pressure Chart
Presents concepts and principles basic to reading multiple range pressure recording charts. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NIP Nursing Integrated Program

NIP 102(3) **Course ID: 006847**
Introduction of Pharmacology
Introduces dosage calculations and medication administration of commonly used medications. Includes an overview of common drug classifications, drugs and their effects. Emphasizes nursing responsibility, accountability, and application of nursing process to drug therapy. Incorporates the fundamental core values: caring, diversity, ethics, excellence, holism, integrity, and patient-centeredness. Incorporates the integrating concepts: context and environment, knowledge and science, quality and safety, and relationship-centered care. Pre-requisite: Admission to the Integrated Nursing Program; successful completion of a Medicaid Nurse Aide equivalent course and proof of active status on the Medicaid Nurse Aide Registry. Completion, with a grade of "C" or better, of BIO135, PSY110, COM181, ENG101, and CIT105 or OST 105 or equivalent. Students must have Basic Life Support certification, current liability insurance coverage and current immunizations for the duration of the course. Pre-requisite or Co-requisite: AHS 100, NIP 116. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

NIP 116(10) **Course ID: 006838**
Fundamentals of Nursing
Focuses on basic nursing concepts that the beginning nurse will need to provide care to diverse clients utilizing the six integrated concepts of nursing practice: context and environment, knowledge and science, personal/professional development, quality and safety, relationship-centered care, and teamwork. Explores current and historical issues impacting nursing. Introduces framework for organizing the care of clients with alterations in basic human needs by incorporating the seven core values of caring, diversity, excellence, integrity, ethics, holism, and patient-centeredness. Focuses on the integration of knowledge, skills acquisition, and critical thinking in the provision of prudent health care delivery. Examines client's needs, health promotion, basic human needs, prevention of complication as related to mechanisms of self-defense including immunity, inflammation, infection, and the surgical patient.
Examines client's needs, health promotion, therapeutic communication, treatment modalities, concepts of mental health and assessment of clients with psychosocial problems. Introduces skills related to mental health care, such as areas of adaptive/maladaptive behaviors and specific mental health disorders in a variety of health care settings. Pre-requisite: Admission to the Integrated Nursing program; successful completion of a Medicaid Nurse Aide equivalent course and proof of active status on the Medicaid Nurse Aide Registry. Completion, with a grade of "C" or better, of BIO135, PSY110, COM181, ENG 101, and CIT 105 or OST 105 equivalent. Students must have Basic Life Support certification, current liability insurance coverage and current immunizations for the duration of the course. Pre-requisite Or Co-requisite: AHS 100 and NIP 102. Lecture: 7.0 credits (105 contact hours). Clinical: 3.0 credits (135 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

NIP 120(3) **Course ID: 005381**
Maternal Child Nursing Care
Focuses on health promotion in the context of the family experiencing reproductive issues including pregnancy, labor and delivery, post-partum, and the newborn. Focuses on management of care for patients with perinatal complications and high-risk newborns. Integrates concepts of the NLN Education Competencies Model, Neuman's Systems Model and the Maslow Hierarchy, including pharmacological and therapeutic interventions throughout the course. Pre-requisite: Completion with a grade of "C" or better in NIP 116, NIP 102 and AHS 100. Students must have Basic Life Support certification, current liability insurance coverage and current immunizations for the duration of the course. Pre-requisite Or Co-requisite: NIP 128. Lecture: 2.0 credits (30 contact hours). Clinical: 1.0 credit (45 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

NIP 128(10) **Course ID: 006842**
Medical Surgical Alteration
Focuses on care of clients with stressors to normal lines of defense in hematology, immune, integumentary, fluid and electrolyte/ acid/base imbalance, respiratory, musculoskeletal, cardiovascular, gastrointestinal/ hepatobiliary, renal/urinary, endocrine, reproductive, and neurological/sensory. Integrates the concepts of nursing practice: context and environment, knowledge and science, personal/professional development, quality and safety, relationship-centered care, and teamwork. Uses the Neuman Systems Model to provide care for clients by incorporating the core values of caring, diversity, excellence, integrity, ethics, holism, and patient-centeredness. Through clinical experience and theory application, examines the clients' needs, health promotion, various treatment modalities, and nursing interventions. Pre-requisite: Completion with a grade of "C" or better in NIP 102, NIP 116; Student must have Basic life support certification, current liability insurance coverage and current immunizations for the duration of the course. Pre-requisite or Co-requisite: NIP 120. Lecture: 6.0 credits (90 contact hours). Lab/Clinical: 4.0 credits (180 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

NIP 140(6) Course ID: 005435
Practical Nursing Role Transition
Prepares students to assume the role of graduate practical nurse. Promotes clinical judgment, delegation and collaboration in the provision of safe, ethical, holistic patient centered care. Explores healthcare management systems and employment seeking skills as students begin to develop a professional identity. Includes a clinical practicum in a health care facility utilizing the nursing process and evidence-based information in delivering clinically competent care. Prerequisite: Completion, with a grade of "C" or better in NIP120, NIP128. Students must have Basic Life Support certification, current liability insurance coverage and current immunizations for the duration of the course. Lecture: 2.0 credits (30 contact hours). Clinical: 4.0 credits (180 contact hours).
Components: Clinical, Lecture
Attributes: Course Also Offered in Modules, Technical

NIP 212(10) Course ID: 016117
Advanced Medical Surgical Nursing
Focuses on advanced assessment of diverse individuals throughout the lifespan by incorporating the integrating concepts of nursing practice: context and environment, knowledge and science, personal/professional development, quality and safety, relationship-centered care, and teamwork. Utilizes the nursing process in care and management of clients with complex health care needs and disorders of self-defense/protection: skin, hair and nails, cancer, hematological system, peripheral vascular system, cardiovascular system, respiratory system, endocrine system, gastrointestinal system, reproductive system, renal/urinary system, nervous system, sensory system, musculoskeletal system and lymphatic system across the lifespan. Pre-requisite: Completion with grade of "C" or better in NIP 120 and NIP 128 or successful completion of a Practical Nursing program curriculum and proof of active unencumbered Kentucky or Compact State Practical Nurse Licensure. Students must have Basic Life Support certification, current liability insurance coverage and current immunizations for the duration of the course. Pre-requisite or Co-requisite: MAT 150. Lecture: 7.0 credits (105 contact hours). Clinical: 3.0 credits (135 contact hours).
Components: Clinical, Lecture
Attributes: Technical

NIP 215(7) Course ID: 005438
Leadership and Specialty Practice
Prepares the student in the Associate Degree Nursing Program to assume the role of a graduate nurse in the synthesis and application of the nursing process for the holistic care of the patient with complex, multidimensional stressors. Emphasizes leadership and management of care, continued skill development and professionalism: to include ethics, integrity, excellence diversity and caring. Introduces the nursing student to the dynamics and issues of teams, organizations and the health care system that require effective leadership interventions and proactive leadership strategies. Emphasizes self-development of leadership attributes, such that every student will be able to recognize effective leadership strategies and will be able to implement these strategies at the appropriate time and place. Integrates theories and concepts from all nursing courses and provisions for practice in predominantly distributive health care settings. Emphasizes the utilization of the nursing process, prevention of illness, maintenance of health, and the restoration of wellness of individuals, families, and communities, experiencing adaptation to complex health problems. Utilizes management skills and techniques in the delivery of patient-centered nursing care to facilitate the role transition from student to professional nurse. Utilizes clinical experiences occurring in a variety of health care settings for students to gain specialty knowledge in important nursing leadership areas which include cost containment, time-management, staffing, delegation and health system issues in order to benefit the nurse in the leadership and management role. Prerequisite: Completion with grade of "C" or better in NIP 211 and MAT 150. Students must have Basic Life Support certification, current liability insurance coverage, and current immunizations for the duration of the course. Prerequisite or corequisite: ENG 102 and Heritage/ Humanities. Lecture: 4.0 credits (60 contact hours). Lab/ Clinical: 3.0 credits (135 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

NIP 220(2) Course ID: 016095
Advanced Cardiac & Emergent Care
Focuses on administration of care for acute cardiovascular emergencies including cardiac arrest, acute myocardial infarction, and stroke. Prepares students to participate in emergency care of patients highlighting the importance of team dynamics and communication, systems of care, and immediate post-cardiac-arrest care. Educates students on airway management and related pharmacology. Students demonstrating essential knowledge and skills, obtaining 85% or greater on the written exam, and successfully completing the megacode will receive an American Heart Association ACLS provider card. Pre-requisite: Completion with grade of "C" or better in NIP 211 and MAT 150. Students must have Basic Life Support certification. Co-requisite: NIP 215. Lecture: 0.5 credits (7.5 contact hours). Lab: 1.5 credits (67.5 contact hours).
Components: Lecture, Lab
Attributes: Technical

NMI Nuclear Medicine and Molecular Imaging Technology

NMI 140(2) Course ID: 005714
Clinical Procedures I
Covers radionuclide skeletal system imaging techniques to demonstrate vascular, soft tissue and skeletal distribution. Includes radionuclide cardiovascular system imaging procedures for myocardial perfusion and viability, functional evaluation (equilibrium and first-pass methods) and deep vein thrombosis detection. Prerequisite: Admission to the NMMI program. Computer Literacy; [(MAT 150) and (BIO 137 and BIO 139)] or consent of instructor. Corequisite: CHE 140 and (PHY 171 or PHY 172) and NMI 141 and NMI 142 and NMI 150). Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

NMI 141(2) Course ID: 005715
Physics and Instrumentation I
Introduces concepts and physical principles that govern radioactivity and the interactions of radiation with matter, the principles, operation and quality control for non-imaging, gas-filled detectors and non-imaging scintillation detectors; also the principles and applications of statistics as they relate to radiation detection and counting. Prerequisite: Admission to the NMMI program. Computer Literacy; [(MAT 150) and (BIO 137 and BIO 139)] or consent of instructor. Corequisite: NMI 140 and NMI 142 and NMI 150. Prerequisite or Corequisite: CHE 140 and either PHY 171 or PHY 172. Laboratory, Lecture: 2.0 credits (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

NMI 142(1) Course ID: 005716
Radiation Biology and Protection
Covers interactions of ionizing radiation with human tissues, its potential effects, dosimetry and its relation to exposure. Covers radiation protection principles, applications and NRC regulations. Prerequisite: Admission to the NMMI program. Computer Literacy; [(MAT 150) and (BIO 137 and BIO 139)] or consent of instructor. Corequisite: (NMI 140 and NMI 141 and NMI 142) or consent of instructor. Prerequisite or Corequisite: CHE 140 and either PHY 171 or PHY 172. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

NMI 150(2) Course ID: 005717
Clinic I
Introduces concepts of clinical practice with application of knowledge and principles from previous general education course work and/or concurrent NMI courses. Will include actual clinical experience in an affiliated nuclear medicine clinical setting. Prerequisite: Admission to the NMMI program. Computer Literacy; [(MAT 150) and (BIO 137 and BIO 139)] or consent of instructor. Corequisite: (NMI 140 and NMI 141 and NMI 142) or consent of instructor. Prerequisite or Corequisite: CHE 140 and either PHY 171 or PHY 172. Clinical: 2.0 credits (180 contact hours).
Components: Clinical
Attributes: Technical

NMI 160(2) Course ID: 005718
Clinical Procedures II
Covers imaging of organs and systems in relation to the abdomen and gastrointestinal tract in addition to imaging procedures and quantitative evaluation of the pulmonary system. Prerequisite: [(NMI 140 and NMI 141 and NMI 142 and NMI 150) with a grade of "C" or greater] or consent of instructor. Corequisite: NMI 161 and NMI 170. Prerequisite or Corequisite: CHE 150. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

NMI 161(2) Course ID: 005719
Physics and Instrumentation II
Includes use and quality control of the various types of systems used for scintillation imaging and computed tomography in hybrid imaging. Covers the configuration, function, and application of computers in nuclear medicine. Prerequisite: [(NMI 140 and NMI 141 and NMI 142 and NMI 150) with a grade of "C" or greater] or consent of instructor. Corequisite: NMI 160 and NMI 170. Prerequisite or Corequisite: CHE 150. Lecture/Lab: 2.0 credits (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

NMI 170(2) Course ID: 005720
Clinic II
Continuation of NMI 150 Clinic I. Covers clinical practice with application knowledge and principles from previous general education course work and previous/concurrent NMI courses. Will include actual clinical experience in an approved nuclear medicine clinical setting. Prerequisite: [(NMI 140 and NMI 141 and NMI 142 and NMI 150) with a grade of "C" or greater] or consent of instructor. Corequisite: (NMI 160 and NMI 161) or consent of instructor. Prerequisite or Corequisite: CHE 150. Clinical: 2.0 credits (180 contact hours).
Components: Clinical
Attributes: Technical

NMI 220(2) Course ID: 005721
Clinic III
Continuation of NMI 170 Clinic II. Covers application of knowledge and principles from previous general education course work and/or previous/concurrent NMI courses. Includes actual clinical experience in an affiliated nuclear medicine clinical setting. Prerequisite: [(NMI 160 and NMI 161 and NMI 170) with a grade of "C" or greater] or consent of instructor. Corequisite: NMI 230 or consent of instructor. Clinical: 2.0 credits (180 contact hours).
Components: Clinical
Attributes: Technical

NMI 230(2) Course ID: 005722
Radiopharmacy
Covers procurement, preparation, quality control, dispensing, patient dosage calculation, identification, documentation, administration, disposal, storage, and safe handling of radioactive materials used by the nuclear medicine technologist. Includes commonly used pharmaceuticals in Nuclear Medicine, including dosages, side effects, contraindications, adverse reactions and antagonists. (CT contrast media administration.). Prerequisite: [(NMI 160 and NMI 161 and NMI 170) with a grade of "C" or greater] or consent of instructor. Corequisite: NMI 220 or consent of instructor. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

NMI 240(4) **Course ID: 005723**
Clinical Procedures III
Covers imaging procedures of the urinary system, central nervous system and endocrine systems including appropriate interventional and challenge procedures. Prerequiste: [(NMI 220 and NMI 230) with a grade of "C" or greater] or consent of instructor. Corequisite: NMI 260 or consent of instructor. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

NMI 250(4) **Course ID: 005724**
Clinical Procedures IV
Covers oncologic imaging procedures, inflammatory/ infectious process imaging procedures, radionuclide therapy procedures, non-imaging procedures related to hematology and vitamin B-12 absorption / excretion and pediatric imaging. Pre-requisite: [(NMI 240 and NMI 260) with a grade of "C" or greater] or consent of instructor. Co-requisite: NMI 270 or consent of instructor. Lecture: 4.0 (60 contact hours).
Components: Lecture
Attributes: Technical

NMI 260(4) **Course ID: 005725**
Clinic IV
Continuation of NMI 220 Clinic III; Covers application of knowledge and principles from previous general education course work and/or previous/concurrent NMI courses. Will include actual clinical experience in an affiliated nuclear medicine clinical setting. Prerequisite: [(NMI 220 and NMI 230) with a grade of "C" or greater] or consent of instructor. Corequisite: NMI 240 or consent of instructor. Clinical: 4.0 credits (360 contact hours).
Components: Clinical
Attributes: Technical

NMI 270(4) **Course ID: 005726**
Clinic V
Continuation of NMI 260 Clinic IV; Covers application of knowledge and principles from previous general education course work and/or previous/concurrent NMI courses. Includes actual clinical experience in an approved nuclear medicine clinical setting. Pre-requisite: [(NMI 240 and NMI 260) with a grade of "C" or greater] or consent of instructor. Co-requisite: NMI 250 or consent of instructor. Clinical: 4.0 credits (360 contact hours).
Components: Clinical
Attributes: Technical

NPN Practical Nursing

NPN 100(2) **Course ID: 004021**
Introduction to Nursing & Health Care System
Includes a historical overview of current health care including medical economics, ethical and legal parameters, roles and responsibilities of health care team members with an emphasis on reflective nursing practice. Explores medical terminology, therapeutic communication techniques, concepts of health, health assessment, self care and basic needs related to activities of daily living across the lifespan. Prerequisite: Admission to Practical Nursing program AND CPR for Health Care Providers certification to be maintained throughout enrollment in the program AND [(NAA 100 or equivalent) within the past three years OR active status on the Medicaid Nurse Aide Registry] AND Digital Literacy as defined by KCTCS. Prerequisite or Corequisite: [(BIO 135 or BIO 139) and (AHS 100 or PSY 223) with a minimum grade of C in each course] OR Consent of PN Coordinator. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

NPN 101(6) **Course ID: 005727**
Nursing Fundamentals
Provides a historical overview of health care system and roles and responsibilities of members of the health care team. Emphasizes practical nursing and the nursing process in the context of Gordon's Functional Health Patterns and Maslow's hierarchy of needs as related to client daily living across the life span. Covers fundamental nursing skills including therapeutic communication techniques; nursing assessment; nursing process and care planning; charting; legal and ethical parameters of health care; rest and sleep; and body mechanics. Prerequisite: Admission to Practical Nursing program AND CPR for Health Care Providers certification to be maintained throughout enrollment in the program AND [(NAA 100 or equivalent) within the past three years OR active status on the Medicaid Nurse Aide Registry] AND Computer Literacy as defined by KCTCS. Prerequisite or Corequisite: [(BIO 135 or BIO 139) and (AHS 100 or CLA 131 or AHS 120 or OST 103) and (AHS 100 or PSY 223) with a minimum grade of C in each course]. Lecture: 3.0 credits (35 contact hour). Lab:
Components: Clinical, Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

NPN 105(6) **Course ID: 004022**
Development of Care Giver Role
Introduces nursing and the nursing process as related to client activities of daily living across the life span. Provides an opportunity to develop and practice psychomotor skills related to health assessment, promotion, maintenance, and illness prevention. Prerequisite: Admission to Practical Nursing program AND CPR for Health Care Providers certification to be maintained throughout enrollment in the program AND [(NAA 100 or equivalent) within the past three years OR active status on the Medicaid Nurse Aide Registry] AND Digital Literacy as defined by KCTCS. Prerequisite or Corequisite: [(BIO 135 or BIO 139) and (AHS 100 or PSY 223) with a minimum grade of C in each course] OR Consent of PN Coordinator. Lecture: 3.0 credits (45 contact hours); Lab/Clinical: 3.0 credits (45:1 ratio/135 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Technical

NPN 106(6) **Course ID: 005627**
Fundamentals of Nursing Care
Provides a historical overview of health care system and roles and responsibilities of members of the health care team. Emphasizes practical nursing and the nursing process in the context of Functional Health Patterns as related to client daily living across the life span. Covers fundamental nursing skills including therapeutic communication techniques; nursing assessment; nursing process and care planning; charting; legal and ethical parameters of health care; rest and sleep; body mechanics and introductory content on the surgical experience. Prerequisite: Admission to Practical Nursing program AND CPR for Health Care Providers certification to be maintained throughout enrollment in the program AND [(NAA 100 or equivalent) within the past three years OR active status on the Medicaid Nurse Aide Registry] AND Computer Literacy as defined by KCTCS. [ENG 101 and MT 110 and (AHS 1 15 or CLA 131) with a minimum C grade.]. Prerequisite or Corequisite: (BIO 139 and PSY 223). Minimum C grade Lecture: 4 credits (60 contact hours). Lab: 2 credits (90 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

NPN 108(3) **Course ID: 005628**
Pharmacology in Nursing
Introduces dosage calculations and medication administration of commonly used medications. Includes an overview of common drugs, drug classifications, and effects administered in the following modes: oral, sublingual, rectal, topical, intradermal, intramuscular, subcutaneous, intravenous including IV fluid administration skills. Emphasizes nursing responsibility, accountability, and application of nursing process to drug therapy. Prerequisite: Admission to the Practical Nursing program AND CPR for Health Care Providers or Red Cross Professional Rescuer certification to be maintained throughout enrollment in the program AND [(NAA 100 or equivalent) within the past three years OR active status on the Medicaid Nurse Aide Registry] AND Computer Literacy as defined by KCTCS. (MT 110 or higher numbered math course, with the exception of higher numbered courses which do not fulfill the general education math for the AAS degree) AND (AHS 115 or CLA 131) AND ENG 101, with a minimum grade of C in each course]. Prerequisite or corequisite: BIO 139 and PSY 223 with a minimum grade of C in each course. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

NPN 110(2) **Course ID: 004023**
Pharmacology I
Introduces techniques used to administer medications. Includes dosages, diagnostic studies, related medical therapies, and legal responsibilities. Prerequisite: Admission to Practical Nursing program AND CPR for Health Care Providers certification to be maintained throughout enrollment in the program AND [(NAA 100 or equivalent) within the past three years OR active status on the Medicaid Nurse Aide Registry] AND Digital Literacy as defined by KCTCS. Prerequisite or Corequisite: [(BIO 135 or BIO 139) and (AHS 100 or PSY 223) with a minimum grade of C in each course] OR Consent of PN Coordinator. Minimum C grade. Lecture: 1.0 credit (15 contact hours); Lab/Clinical: 1.0 credit (45:1 ratio/45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

NPN 111(3) **Course ID: 005728**
Pharmacology
Introduces dosage calculations and medication administration of commonly used medications. Includes an overview of common drugs, drug classifications, and effects administered in the following modes: oral, sublingual, rectal, topical, intradermal, intramuscular, subcutaneous, intravenous including IV fluid administration skills. Emphasizes nursing responsibility, accountability, and application of nursing process to drug therapy. Prerequisite: Admission to Practical Nursing program AND CPR for Health Care Providers certification to be maintained throughout enrollment in the program AND [(NAA 100 or equivalent) within the past three years OR active status on the Medicaid Nurse Aide Registry] AND Digital Literacy as defined by KCTCS. Prerequisite or corequisite: Pathway 2: NPN 101 and (BIO 135 or BIO 139) and (AHS 115 or AHS 120 or CLA 131 or OST 103) and (AHS 100 or PSY 223). If taken as pre-requisite must complete with a "C" or better. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (90 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

NPN 115(6) **Course ID: 004626**
Practical Nursing Bridge Course
Provides overview of the health care system and roles and responsibilities of the health care team. Emphasizes the nursing process in the context of Gordon's Functional Health Patterns and Maslow's hierarchy of needs as related to client daily living across the life span. Covers fundamental nursing skills including therapeutic communication techniques, nursing assessment, and the nursing process. Introduces dosage calculations and administration of medications. Includes an overview of common drugs, drug classifications, and effects of drugs administered in all modes. Emphasizes nursing responsibility, accountability, and the application of the nursing process to drug therapy. Upon successful completion of all components of the course, the student will be admitted to NPN 135 and will have earned advanced standing hours, dependent upon curriculum option. Prerequisite: Admission to the Practical Nursing Program AND (NAA 115 or equivalent) AND (BIO 135 or BIO 139) AND (ENG 101 or COM 181 or COM 252 or TEC 200) AND (CLA 131 or AHS 120 or OST 103) AND Digital Literacy with a minimum grade of C in each prerequisite course. Pre-requisite Or Co-requisite: (AHS 100 or PSY 223) with a minimum grade of "C". Lecture: 3.0 credit hours (45 contact hours). Laboratory: 3.0 credit hours (135 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

NPN 125(3) **Course ID: 004025**
Mental Health
Applies nursing process to clients experiencing common mental health problems with emphasis on assisting clients to cope with psychological problems throughout the life span - i.e., chemical dependency, violence and other stress and developmental problems related to mental health. Prerequisite: Pathway 1: ((NPN 100 and NPN 105 and NPN 110) and (BIO 135 or BIO 139) and (AHS 100 or PSY 223) or Consent of PN coordinator. Minimum C grade). Prerequisite or Corequisite: Pathway 2: ((NPN 101 and NPN 111 and (BIO 135 or BIO 139) and (AHS 100 or PSY 223) and (AHS 120 or AHS 115 or OST 103 or CLA 131). Minimum C grade.) Pathway 3: ((NPN 106 and NPN 108 and BIO 139 and PSY 223) Minimum C grade). Lecture: 2.0 credits (30 contact hours). Lab/Clinical: 1.0 credit (45 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

NPN 130(3) **Course ID: 004026**
Pharmacology II
Studies common drugs by classification and effects with emphasis on responsibility, accountability, and application of the nursing process to drug therapy. Prerequisite: ((NPN 100 and NPN 105 and NPN 110 and (BIO 135 or BIO 139) and (AHS 100 or PSY 223) or Consent of PN Coordinator). Minimum C grade). Lecture: 2.0 credits (30 contact hours). Lab/Clinical: 1.0 credit (45 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Technical

NPN 135(6) **Course ID: 004027**
Introduction to Health Deviation
Introduces application of the nursing process for selected child/adult clients experiencing common health deviations interfering with activities of daily living. Emphasis in on the nurse as the provider of care. Prerequisite: Pathway 1: ((NPN 100 and NPN 105 and NPN 110 and (BIO 135 or BIO 139) and (AHS 100 or PSY 223)) or Consent of PN Coordinator. Minimum "C" grade Pathway 2: ((NPN 101 and 111) or NPN 115 and (BIO 135 or BIO 139) and (AHS 115 or AHS 120 or CLA 131 or OST 103) and AHS 100 or PSY 223) Minimum "C" grade) Lecture: 3.0 credits (45 contact hours); Lab/Clinical: 3.0 credit (45:1 ratio/135 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

NPN 200(5) **Course ID: 004028**
Med Surg I
Applies nursing process to selected child/adult clients experiencing common health deviations interfering with activities of daily living with emphasis on the nurse as the provider of care. Prerequisite: ((NPN 125 and NPN 130 and NPN 135 and NPN 201) or Consent of PN Coordinator). Minimum C grade. Lecture: 3 credits (45 contact hours). Lab/Clinical: 2 credits (90 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Technical

NPN 201(3) **Course ID: 004024**
Child Bearing Family
Applies nursing process to childbearing families with focus on health promotion and common health alterations in the reproductive process. Prerequisite: Pathway 1: (NPN 100 and NPN 105 and NPN 110 and (BIO 135 or BIO 139) and (AHS 100 or PSY 223)) or Consent of PN Coordinator. Minimum "C" grade. Pathway 2: (NPN 101 and NPN 111 and (BIO 135 or BIO 139) and (AHS 100 or PSY 223)) Minimum "C" grade. Pathway 3: (NPN 106 and NPN 108 and BIO 139 and PSY 223). Minimum "C" grade. Prerequisite or Corequisite: Pathway 2: (NPN 101 and NPN 111 or NPN 115) and (BIO 135 or BIO 139) and (AHS 115 or AHS 120 or CLA 131 or OST 103) and (AHS 100 or PSY 223) and NPN 125 and NPN 135 and (TEC 200 or ENG 101 or COM 181 or COM 252. Pathway 3: None. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (45 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

NPN 202(6) **Course ID: 005729**
Med-Surg I Alterations
Applies nursing process to selected child/adult clients experiencing common health deviations related to metabolic dysfunctions, fluid and electrolyte imbalances, cardiovascular dysfunctions, and cellular deviations that interfere with activities of daily living with emphasis on the nurse as the provider of care. Prerequisite: (NPN 101 and NPN 111) and (BIO 135 or BIO 139) and (AHS 115 or AHS 120 or CLA 131 or OST 103). Minimum C grade. Prerequisite or corequisite: NPN 135. Minimum C grade. Laboratory, Lecture: 6 credits (150 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

NPN 205(5) **Course ID: 004029**
Med Surg II
Applies the nursing process to child/adult clients experiencing more complex health alterations. The focus is on multi-system failure, fluid and electrolytes, neurological problems, and cellular deviation. Prerequisite: NPN 200. All courses must be achieved with a grade of "C" or higher. Lecture: 3.0 credits (45 contact hours); Lab/Clinical: 2.0 credits (90 contact hours/45:1 ratio).
Components: Clinical, Laboratory, Lecture
Attributes: Technical

NPN 206(6) **Course ID: 005730**
Med-Surg II Alterations
Applies nursing process to selected child/adult clients experiencing complex health issues related to multi-system failure, neurological disorders, coordination dysfunctions, and elimination problems that interfere with activities of daily living with an emphasis on the nurse as the provider of care. Prerequisite: (NPN 202 with a grade of "C" or greater) or Consent of PN Coordinator. Prerequisite or corequisite: NPN 201. If prerequisite, a grade of "C" or greater must be achieved. Laboratory, Lecture: 6 credits (150 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

NPN 210(4) **Course ID: 004030**
Clinical Practicum
Integrates the theoretical concepts learned throughout the program in application of this knowledge during the direct care of clients. Promotes critical thinking and problem solving skills during the nursing role performances of provider of care, manager of care, and member within the discipline. Prerequisite: Pathway 1: NPN 205. Minimum "C" grade. Pathway 2: NPN 206. Minimum "C" grade. Pre-requisite Or Co-requisite: Pathway 3: (NPN 208 and NPN 215) or Consent of PN Coordinator. Minimum "C" grade. Lecture: 1.0 credit (15 contact hours); Practicum: 3.0 credits (45:1 ratio/ 135 contact hours).
Components: Lecture, Practicum
Attributes: Course Also Offered in Modules, Technical

NPN 215(1) **Course ID: 004125**
Nursing Trends & Issues
Prepares the student for the role of the practical nurse. Prerequisite: Pathway 1: NPN 125 and NPN 130 and NPN 135 and NPN 201. Minimum "C" grade. Pathway 2: NPN 125 and NPN 135. Minimum "C" grade. Pathway 3: NPN 125 and NPN 140 and NPN 201. Minimum "C" grade. Prerequisite or corequisite: Pathway 2: NPN 201 and NPN 202 and NPN 206 and NPN 210. Minimum "C" grade. Pathway 3: NPN 208 and NPN 210. Minimum "C" grade. Lecture: 1.0 credit (15 contact hours).
Components: Clinical, Lecture
Attributes: Course Also Offered in Modules, Technical

NPN 1011(0.5) **Course ID: 006270**
Roles & Professionalism
Provides a historical overview of health care system and roles and responsibilities of members of the health care team. Covers fundamental nursing skills including therapeutic communication techniques, legal and ethical parameters of health care, cultural aspects of care, and professionalism. Prerequisite: Admission into the KCTCS Online Practical Nursing Program requires minimum grade of C in (BIO137 & BIO 139) and (AHS 115 or CLA 131 or AHS 120 or OST 103) and (PSY100 or PY110 and PSY 223) and ENG101 and CIS100 or equivalency Current CPR card for Health Care Providers; Current certification must be maintained throughout the program. Proof of active status on the Kentucky Nurse Aide Registry (KNAR). Lecture: 0.5 credit (7.5 contact)
Components: Lecture

NPN 1012(1) **Course ID: 006271**
Nursing Process
Emphasizes practical nursing and the nursing process in the context of Gordon's Functional Health Patterns and Maslow's hierarchy of needs as related to client daily living across the life span. Covers fundamental nursing skills including nursing assessment, nursing process and care planning, and charting. Prerequisite: NPN 1011 with a C or better. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

NPN 1013(1) **Course ID: 006272**
Basic Human Needs
Emphasizes practical nursing and the nursing process in the context of Gordon's Functional Health Patterns and Maslow's hierarchy of needs as related to client daily living across the life span. Covers fundamental nursing skills including nursing assessment; nursing process and care planning; charting; legal and ethical parameters of health care; rest and sleep; and body mechanics. Prerequisite: NPN 1011 with a C or better. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

NPN 1014(0.5) **Course ID: 006273**
Nutrition
Emphasizes practical nursing and the nursing process in the context of Gordon's Functional Health Patterns and Maslow's hierarchy of needs as related to client daily living across the life span. Covers fundamental nursing skills including metabolism/nutrition; rest and sleep; and health promotion. Prerequisite: NPN 1011, NPN 1012 and NPN 10103 with a C or better. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

NPN 1015(1) **Course ID: 006274**
Nursing Fundamentals Lab
Emphasizes practical nursing and the nursing process in the context of Gordon's Functional Health Patterns and Maslow's hierarchy of needs as related to client daily living across the life span. Includes the application of knowledge and skills in a lab setting. Prerequisite: NPN 1011 Completion with a C or better. Prerequisite or corequisite: NPN 1012 and NPN 1013 and NPN 1014 (Pre-requisites must be completed with a C or better). Laboratory: 1 credit (45 contact hours).
Components: Laboratory

NPN 1061(1) **Course ID: 005699**
PN Role in Health Care Delivery
Presents an introduction to the role of the Practical Nurse with emphasis on legal, ethical, and cultural components. Reflects Gordon's Functional Health Patterns across the lifespan, therapeutic communication, and the importance of life-long learning. Prerequisite: Current CPR card for Health Care Providers; Current certification must be maintained throughout the program. Successful completion of a Medicaid Nurse Aide equivalent course within the past three (3) years or proof of active status on the Medicaid Nurse Aide Registry. Admission into the Practical Nursing Program. (ENG 101 and MT 110 and (AHS 115 or CLA 131)). Minimum C grade. Prerequisite or Corequisite: BIO 139 and PSY 223. Must achieve a C or higher in each prerequisite course. Lecture: 0.75 credits (11.25 contact hours). Lab: 0.25 credits (11.25 contact hours).
Components: Laboratory, Lecture

NPN 1062(1.5) **Course ID: 005700**
Nursing Process
Presents the nursing process and the development of the patient plan of care. Prerequisite: NPN 1061. Minimum C grade. Prerequisite or Corequisite: (BIO 139 and PSY 223) Minimum C grade. Lecture: 1 credit (15 contact hours). Lab: 0.5 credits (22.5 contact hours).
Components: Laboratory, Lecture

NPN 1063(1.5) **Course ID: 005701**
Health Assessment
Presents health assessment and a lab component of various skills that must be successfully completed prior to the student's caring for patients in the clinical arena (versus simulated patients). Prerequisite: NPN 1062 Minimum C grade. Prerequisite or Corequisite: (BIO 139 and PSY 223). Minimum C grade. Lecture: 1 credit (15 contact hours). Lab: 0.25 credits (11.25 contact hours). Clinical: 0.25 credits (11.25 contact hours).
Components: Clinical, Laboratory, Lecture

NPN 1064(2) **Course ID: 005702**
Care of the Client Undergoing Surgical Intervention
Presents the patient undergoing surgical intervention and the related lab/clinical components. Prerequisite: NPN 1063. Minimum C grade.Prerequisite or Corequisite: (BIO 139 and PSY 223). Minimum C grade. Lecture: 1.25 credits (18.75 contact hours). Lab: 0.25 credits (11.25 contact hours). Clinical: 0.5 credits (22.5 contact hours).
Components: Clinical, Laboratory, Lecture

NPN 1081(0.5) **Course ID: 005703**
Overview of Pharmacology
Presents an overview of pharmacology and the legal and ethical implications for nursing practice. Prerequisite: Admission to program. Current CPR card for Health Care Providers or Red Cross Professional Rescuer; current certification must be maintained throughout the program. Successful completion of a Medicaid Nurse Aide equivalent course within the past three (3) years or proof of active status on the State Nurse Aide Registry (SRNA). (MT 110 or higher math) and (AHS 115 or CLA 131) and ENG 101. Minimum C grade. Corequisite or Prerequisite: BIO 139 and PSY 223. Must achieve a C or greater in each course. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NPN 1082(1.15) **Course ID: 005704**
Medication Administration
Presents a discussion of various drug categories and the procedures for correct administration via various routes. Prerequisite: NPN 1081. Minimum C grade Corequisite or Prerequisite: BIO 139 and PSY 223. Minimum C grade. Lecture: 0.75 credits (11.25 contact hours). Lab: 0.4 credits (18 contact hours).
Components: Laboratory, Lecture

NPN 1083(1.35) **Course ID: 005733**
Parenteral Medication Administration
Presents the concepts and responsibilities of the nurse during intravenous therapy. Pre-requisite: NPN 1082 . Minimum C grade. Prerequisite or corequisite: BIO 139 and PSY 223. Minimum C grade. Laboratory, Lecture: 1.35 credits (38.25 contact hours)
Components: Laboratory, Lecture

NPN 1111(1) **Course ID: 006276**
Intro to Pharmacology
Provides an overview of pharmacological principles, introducing drug calculations, drug classifications and common drugs, as well as effects of medications. Emphasizes nursing responsibility, accountability, and application of nursing process to drug therapy. Prerequisite: NPN 1011 Completion with a C or better. Lecture: 1 credit (15 contact hours).
Components: Lecture

NPN 1112(1) **Course ID: 006277**
Medication Administration
Focuses on the role of the practical nurse in regard to medication administration utilizing oral, enteral, sublingual, buccal, rectal, topical, transdermal, intradermal, intramuscular, and subcutaneous routes. Emphasizes nursing responsibility, accountability, and application of nursing process to drug therapy. Prerequisite: NPN 1111. Completion with a C or better. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

NPN 1113(1) **Course ID: 006278**
Intravenous Therapy
Focuses on the role of the practical nurse in regard to medication administration utilizing the oral, enteral, sublingual, buccal, rectal, topical, transdermal, intradermal, intramuscular, and subcutaneous routes. Emphasizes nursing responsibility, accountability, and application of nursing process to drug therapy. Prerequisite: NPN 1112 Completion with a C or better. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

NPN 1251(0.75) **Course ID: 005705**
Intro to Psychiatric-Mental Health Nursing
Presents the introduction to psychiatric-mental health nursing and the nurse's role in multidisciplinary care. Prerequisite: Pathway 1: ((NPN 100 and NPN 105 and NPN 110 and (BIO 135 or BIO 139) and (AHS 100 or PSY 223) with a minimum grade of "C" in each course) or Consent of PN Coordinator. Prerequisite or corequisite: Pathway 2: ((NPN 101 and NPN 111 and (BIO 135 or BIO 139) and (AHS 100 or PSY 223) and (AHS 120 or AHS 115 or OST 103 or CLA 131) with a minimum grade of "C" in each course) or Consent of PN Coordinator. Pathway 3: (NPN 106 and NPN 108 and BIO 139 and PSY 223) with a minimum grade of "C" in each course) or Consent of PN Coordinator. Lecture: 0.5 credits (7.5 contact hours). Clinical: 0.25 credits (11.25 contact hours).
Components: Clinical, Lecture

NPN 1252(0.75) **Course ID: 005706**
Components of the Nurse-Client Relationship
Presents the aspects of therapeutic communication and the nurse's role in multidisciplinary care. Prerequisite: ALL Pathways: NPN 1251. Minimum "C" grade. Corequisite or Prerequisite: Pathway 2: (NPN 101 and NPN 111 and (BIO 135 or BIO 139) and (AHS 100 or PSY 223) and (AHS 120 or AHS 115 or OST 103 or CLA 131)) with a minimum grade of "C" in each course. Pathway 3: (NPN 106 and NPN 108 and BIO 139 and PSY 223) with a minimum grade of "C" in each course. Lecture: 0.5 credits (7.5 contact hours). Clinical: 0.25 credits (11.25 contact hours).
Components: Clinical, Lecture

NPN 1253(0.75) **Course ID: 005707**
Clients with Psychiatric Disorders
Presents the disorders specific to adult issues of interferences with coping/stress tolerance and the nurse's role in multidisciplinary care. Prerequisite: ALL Pathways: NPN 1252. Minimum "C" grade. Corequisite or Prerequisite: Pathway 2: (NPN 101 and NPN 111 and (BIO 135 or BIO 139) and (AHS 100 or PSY 223) and (AHS 120 or AHS 115 or OST 103 or CLA 131)) with a minimum grade of "C" in each course. Pathway 3: (NPN 106 and NPN 108 and BIO 139 and PSY 223) with a minimum grade of "C" in each course. Lecture: 0.5 credits (7.5 contact hours). Clinical: 0.25 credits (11.25 contact hours).
Components: Clinical, Lecture

NPN 1254(0.75) **Course ID: 005708**
Special Populations with Psychiatric Disorders
Presents content specific to special populations such as of infants, children and adolescents, the issue of abuse and neglect of children and elders, and the nurse's role in multidisciplinary care. Prerequisite: ALL Pathways: NPN 1253. Minimum "C" grade. Prerequisite or Corequisite: Pathway 2: (NPN 101 and NPN 111 and (BIO 135 or BIO 139) and (AHS 100 or PSY 223) and (AHS 120 or AHS 115 or OST 103 or CLA 131)) with a minimum grade of "C" in each course. Pathway 3: (NPN 106 and NPN 108 and BIO 139 and PSY 223) with a minimum grade of "C" in each course. Lecture: 0.5 credits (7.5 contact hours). Clinical: 0.25 credits (11.25 contact hours).
Components: Clinical, Lecture

NPN 1256(1) **Course ID: 006280**
Therapeutic Modalities and Plan of Care
Applies the nursing process to clients experiencing common mental health problems with emphasis on assisting clients to cope with psychological problems throughout the life span. Focuses on abnormal aspects of mental health. Prerequisite: NPN 1255 Completion with a C or better. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

NPN 1257(1) **Course ID: 006281**
Mental Health: Lab and Clinical Experience
Applies the nursing process to clients experiencing common mental health problems with emphasis on assisting clients to cope with psychological problems throughout the life span. Applies the nursing process within laboratory and clinical settings. Prerequisite: NPN 1256 Completion with a C or better. Laboratory or Clinical: 1.0 credit (45 contact hours).
Components: Clinical, Laboratory

NPN 1351(0.75) **Course ID: 006282**
Perioperative Care
Includes the nursing process for selected child/adult clients experiencing common health deviations interfering with activities of daily living. Emphasizes the nurse as the provider of care for those patients experiencing alterations in the perioperative cycle. Prerequisite: Pathway 1: ((NPN 100 and NPN 105 and NPN 110 and (BIO 135 or BIO 139) and (AHS 100 or PSY 223) with a minimum grade of "C" in each course) OR Consent of PN Coordinator. Pathway 2: ((NPN 1016 and 1113 and (BIO 135 or BIO 139) and (AHS 115 or AHS 120 or CLA 131 or OST 103)) with a minimum grade of "C" in each course. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

NPN 1352(1.25) **Course ID: 006283**
Alterations in Oxygenation 1
Provides for application of the nursing process for selected child/adult clients experiencing common health deviations interfering with activities of daily living. Emphasizes the nurse as provider of care for those patients experiencing alterations in oxygenation focusing on respiratory function. Prerequisite: NPN 1351 with a C or better. Lecture: 0.75 credit (11.25 contact hours). Laboratory: 0.5 credit (22.5 contact hours).
Components: Laboratory, Lecture

NPN 1353(1) **Course ID: 006284**
Clinical 1
Provides for the application of the nursing process for selected child/adult clients experiencing common health deviations interfering with activities of daily living. Emphasizes the nurse as the provider of care for patients during the perioperative cycle and those experiencing alterations in oxygenation focusing on respiratory function. Prerequisite: NPN 1351 with a C or better. Prerequisite or corequisite: NPN 1352 (Pre-requisites require a C or better). Clinical 1 credit (45 contact hours).
Components: Clinical

NPN 1354(1.25) **Course ID: 006285**
Alterations in Oxygenation 2
Provides for application of the nursing process for selected child/adult clients experiencing common health deviations interfering with activities of daily living. Emphasizes the nurse as provider of care for those patients experiencing alterations in oxygenation focusing on respiratory function. Prerequisite: (NPN 1351 and NPN 1352 and NPN 1353) with a grade of "C" or better in each course. Lecture: 0.75 credits (11.25 contact hours). Lab: 0.5 credit (22.5 contact hours).
Components: Laboratory, Lecture

NPN 1355(0.75) **Course ID: 006286**
Threats To Defenses
Includes the nursing process for selected child/adult clients experiencing common health deviations interfering with activities of daily living. Emphasizes the nurse as provider of care for those patients experiencing threats to body defenses. Prerequisite: NPN 1354 Completion with a C or better. Lecture: 0.75 credit (11.25 contact).
Components: Lecture

NPN 1356(1) **Course ID: 006287**
Clinical II
Introduces application of the nursing process for selected child/adult clients experiencing common health Deviations with activities of daily living. Emphasizes the nurse as a provider of care for those patients experiencing alterations in body defenses and alterations in oxygenation. Prerequisite: NPN 1355 NPN 1355 (Pre-requisites require a C or better). Clinical: 1.0 credit (45 contact hours).
Components: Clinical

NPN 1401(0.75) Course ID: 005760
Fluid/Electrolyte Balance Care
Presents content on fluid and electrolyte balance and the role of the practical nurse in planning appropriate interventions. Prerequisite: NPN 106 and NPN 108 and BIO 139 and PSY 223 with a minimum grade of C in each course. Prerequisite or corequisite: (NPN 125 and NPN 201). Minimum C grade. Lecture: 0.5 credits (7.5 contact hours), Laboratory: 0.125 credits (5.625 contact hours), Clinical 0.125 credits (5.625 contact hours).
Components: Clinical, Laboratory, Lecture

NPN 1402(0.75) Course ID: 005761
Cardio-Respiratory Function Care
Presents content on cardiovascular and respiratory function, and the role of the practical nurse in planning appropriate interventions. Prerequisite: NPN 1401 Minimum C grade. Prerequisite or corequisite: (NPN 201 and NPN 125) Minimum C grade. Lecture: 0.5 credits (7.5 contact hours), Laboratory: 0.125 credits (5.625 contact hours), Clinical 0.125 credits (5.625 contact hours).
Components: Clinical, Laboratory, Lecture

NPN 1403(0.75) Course ID: 005763
Nutrition and Activity/Exercise Functions across the Lifespan
Presents content on alterations in nutrition and activity/exercise, the administration of medications to children, and the role of the practical nurse in planning appropriate interventions. Prerequisite: NPN 1402 Minimum C grade. Prerequisite or corequisite: NPN 201 and NPN 125 with minimum C grade. Lecture: 0.5 credits (7.5 contact hours), Laboratory: 0.125 credits (5.625 contact hours), Clinical 0.125 credits (5.625 contact hours).
Components: Clinical, Laboratory, Lecture

NPN 1404(0.75) Course ID: 005764
Surgical Intervention Care
Presents content on the adult/child patient experiencing surgical intervention, and the role of the practical nurse in planning appropriate care. Prerequisite: NPN 1403 Minimum C grade. Prerequisite or corequisite: NPN 201 and NPN 125. Minimum C grade. Lecture: 0.5 credits (7.5 contact hours), Laboratory: 0.125 credits (5.625 contact hours), Clinical 0.125 credits (5.625 contact hours).
Components: Clinical, Laboratory, Lecture

NPN 2011(0.75 - 1) Course ID: 005770
Ante-Partal Phase Care
Presents content on prenatal assessment and the role of the practical nurse in planning appropriate interventions. Prerequisite: Pathway 1: (NPN 100 and NPN 105 and NPN 110) and (BIO 135 or BIO 139) and (AHS 100 or PSY 223)) with a minimum grade of "C" in each course. Pathway 2: (NPN 101 and NPN 111 and (BIO 135 or BIO 139) and (AHS 100 or PSY 223)) with a minimum grade of "C" in each course. Pathway 3: (NPN 106 and NPN 108 and BIO 139 and PSY 223) with a minimum grade of "C" in each course. Prerequisite or corequisite: Pathway 2: (NPN 202 and (AHS 120 or AHS 115 or OST 103 or CLA 131)). Minimum "C" grade. Lecture: 0.5 (7.5 contact hours), Clinical: 0.125 credits (5.625 contact hours); Laboratory: 0.125 (5.625 contact hours).
Components: Clinical, Laboratory, Lecture

NPN 2012(0.75) Course ID: 005771
Intra-Partal Phase Care
Presents content on intra-partal assessment and the role of the practical nurse in planning appropriate interventions. Prerequisite: NPN 2011 Minimum C grade. Prerequisite or corequisite: Pathway 2: (NPN 202 and (AHS 120 or AHS 115 or OST 103 or CLA 131)) with a minimum grade of "C" in each course. Lecture: 0.5 credits (7.5 contact hours), Clinical: 0.125 (5.625 contact hours), Laboratory: 0.125 (5.625 contact hours).
Components: Clinical, Laboratory, Lecture

NPN 2013(0.75) Course ID: 005772
Post-Partal: Maternal Phase Care
Presents content on maternal post-partal assessment and the role of the practical nurse in planning appropriate interventions. Prerequisite: NPN 2012 with minimum C grade. Prerequisite or corequisite: Pathway 2: (NPN 202 and (AHS 120 or AHS 115 or OST 103 or CLA 131)) with a minimum grade of "C" in each course. Lecture: 0.5 credits (7.5 contact hours), Clinical: 0.125 (5.625 contact hours), Laboratory: 0.125 (5.625 contact hours).
Components: Clinical, Laboratory, Lecture

NPN 2014(0.75) Course ID: 005773
Nursing Care of the Newborn
Presents content on newborn assessment and the role of the practical nurse in planning appropriate interventions. Prerequisite: NPN 2013 Minimum C grade. Prerequisite or corequisite: Pathway 2: (NPN 202 and (AHS 120 or AHS 115 or OST 103 or CLA 131)) with a minimum grade of "C" in each course. Lecture: 0.5 credits (7.5 contact hours), Clinical: 0.125 (5.625 contact hours), Laboratory: 0.125 (5.625 contact hours).
Components: Clinical, Laboratory, Lecture

NPN 2015(0.5) Course ID: 006288
Prenatal and Women's Health
Presents content on prenatal assessment and women's health focusing on the role of the practical nurse in planning appropriate interventions in an interactive format. Prerequisite: Pathway 1*: (NPN 100 and NPN 105 and NPN 110 and (BIO 135 or BIO 139) and (AHS 100 or PSY 223)). Minimum "C" grade. Pathway 2*: (NPN 101 and NPN 111 and (BIO 135 or BIO 139) and (AHS 100 or PSY 223)) Minimum "C" grade. Pathway 3*: (NPN 106 and NPN 108 and BIO 139 and PSY 223). Minimum "C" grade. *NOTE: KCTCS ONLINE requires the general education courses leading to the AAS in Nursing- BIO 137 & 139; PSY 110 and PSY 223. Minimum "C" grade. Prerequisite or corequisite: Pathway 2: (NPN 202 and (AHS 120 or AHS 115 or OST 103 or CLA 131)). Minimum "C" grade. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

NPN 2021(1) Course ID: 006293
Alterations in Metabolism
Applies nursing process to selected child/adult clients experiencing common health deviations related to metabolic dysfunctions that interfere with activities of daily living with emphasis on the role of the practical nurse as the provider of care. Prerequisite: NPN 1356 Completion with a C or better. Lecture: 1 credit (15 contact hours).
Components: Lecture

NPN 2022(1) Course ID: 006294
Fluid and Electrolytes
Applies nursing process to selected child/adult clients experiencing common health deviations related to fluid and electrolyte imbalances that interfere with activities of daily living with emphasis on the nurse as the provider of care. Prerequisite: NPN 2021 Completion with a C or better. Lecture: 1 credit (15 contact hours).
Components: Lecture

NPN 2023(1) Course ID: 006295
Metabolism Clinical Practice
Demonstrate the knowledge gained in NPN2021 and NPN2022. Provide care for clients with alterations in metabolism, fluid and electrolyte imbalances. Prerequisite: NPN 2022 Completion with a C or better. Laboratory or Clinical: 1 credit (45 contact hours).
Components: Clinical, Laboratory

NPN 2024(1) Course ID: 006296
Cellular Proliferation
Applies nursing process to selected child/adult clients experiencing common health deviations related to cellular deviations that interfere with activities of daily living with emphasis on the nurse as the provider of care. Prerequisite: NPN 2023 Completion of a C or better. Lecture: 1 credit (15 contact hours).
Components: Lecture

NPN 2025(1) Course ID: 006297
Alterations in Perfusion
Applies nursing process to selected child/adult clients experiencing common health deviations related to cardiovascular dysfunctions that interfere with activities of daily living with emphasis on the nurse as the provider of care. Prerequisite: NPN 1356 Completion with a C or better. Completion with a C or better. Lecture: 1 credit (15 contact hours).
Components: Lecture

NPN 2026(1) Course ID: 006298
Perfusion & Cell Deviation Clinicals
Demonstrates the knowledge gained in NPN2024 and NPN2025 in providing care for clients with alterations in metabolism, fluid and electrolyte imbalances. Prerequisite: NPN 2025 Completion with a C or better. Laboratory or Clinical: 1.0 credit (45 contact hours).
Components: Clinical, Laboratory

NPN 2061(1) Course ID: 006299
Alterations in Coordination
Applies nursing process to selected child/adult clients experiencing common health deviations related to coordination dysfunction that interfere with activities of daily living with emphasis on the role of the practical nurse as the provider of care. Prerequisite: NPN 2026. Completion with a C or better. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

NPN 2062(1.5) Course ID: 006300
Neurological Alterations
Applies nursing process to selected child/adult clients experiencing common health deviations related to coordination dysfunction that interferes with activities of daily living with emphasis on the role of the practical nurse as the provider of care. Prerequisite: NPN 2061 Completion with a C or better. Lecture: 1.5 credit (22.5 contact hours).
Components: Lecture

NPN 2063(1) Course ID: 006301
Neuro/Coordination Clinical
Applies nursing process to selected child/adult clients experiencing common health deviations related to coordination dysfunction that interfere with activities of daily living with emphasis on the role of the practical nurse as the provider of care. Prerequisite: NPN 2062. Completion with a "C" or better. Laboratory: 1.0 credit (45 contact hours)
Components: Laboratory

NPN 2064(1) Course ID: 006302
Elimination Alterations
Applies nursing process to selected child/adult clients experiencing common health deviations related to elimination dysfunction that interfere with activities of daily living with emphasis on the role of the practical nurse as the provider of care. Prerequisite: NPN 2063 Completion with a C or better. Lecture: 1 credit (15 contact hours).
Components: Lecture

NPN 2065(0.5) Course ID: 006303
Multi System Failure
Applies nursing process to selected child/adult clients experiencing common health deviations related to multi-system failure that interfere with activities of daily living with emphasis on the role of the practical nurse as the provider of care. Prerequisite: NPN 2064 Completion with a C or better. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

NPN 2066(1) Course ID: 006304
Multi System Failure Clinical
Applies nursing process to selected child/adult clients experiencing common health deviations related to multi-system failure and elimination disorders that interfere with activities of daily living with emphasis on the role of the practical nurse as the provider of care. Prerequisite: NPN 2065. Completion with a "C" or better. Clinical: 1.0 credit (45 contact hours).
Components: Clinical

NPN 2081(2) Course ID: 005765
Neurological Function Care
Presents content on alterations in neurological function and the role of the practical nurse in planning appropriate interventions. Prerequisite: (NPN 125 and NPN 140 and NPN 201). Minimum C grade. Corequisite: NPN 210 and NPN 215. Lecture: 1.2 credits (18 contact hours), Clinical: 0.8 credits (36 contact hours).
Components: Clinical, Lecture

NPN 2082(2) **Course ID: 005766**
Coordination/Special Senses/Integumentary Function
Presents content on patients with alterations in coordination, special senses, and integumentary function, and the role of the practical nurse in planning appropriate interventions. Prerequisite: NPN 2081 with a grade of "C" or greater. Corequisite: NPN 210 and NPN 215. Lecture: 1.2 credits (18 contact hours), Clinical: 0.8 credits (36 contact hours).
Components: Clinical, Lecture

NPN 2083(2) **Course ID: 005767**
Cardiovascular Function Care
Presents content on the patient with alterations in cardiovascular function and the role of the practical nurse in planning appropriate interventions. Prerequisite: NPN 2082 with a grade of "C" or greater. Corequisite: NPN 210 and NPN 215. Lecture: 1.2 credits (18 contact hours), Clinical: 0.8 credits (36 contact hours).
Components: Clinical, Lecture

NPN 2084(2) **Course ID: 005768**
Metabolism & Elimination Care
Presents content on the patient with alterations in metabolism and elimination and the role of the practical nurse in planning appropriate interventions. Prerequisite: NPN 2083 with a grade of "C" or greater. Corequisite: NPN 210 and NPN 215. Lecture: 1.2 credits (18 contact hours), Clinical: 0.8 credits (36 contact hours).
Components: Clinical, Lecture

NPN 2085(2) **Course ID: 005769**
Cell Function/Multi-System Failure Care
Presents content on alterations in cellular deviation and multi-system organ failure, and the role of the practical nurse in planning appropriate interventions. Prerequisite: NPN 2084 with a grade of "C" or greater. Corequisite: NPN 210 and 215. Lecture: 1.2 credits (18 contact hours), Clinical: 0.8 (36 contact hours).
Components: Clinical, Lecture

NPN 2101(1) **Course ID: 005774**
Theoretical Concepts of Clinical Practicum
Presents concepts of legal nursing practice that will be implemented in the NPN 2102 practicum experience. Prerequisite: Pathway 1: NPN 205. Minimum "C" grade Pathway 2: NPN 206. Minimum "C" grade. Prerequisite or co-requisite: Pathway 3: ((NPN 208 and NPN 215) with a minimum grade of "C" in each course) or Consent or PN Coordinator. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

NPN 2102(3) **Course ID: 005775**
Clinical Practicum
Presents the nursing practicum experience in the clinical setting. Prerequisite: All Pathways: NPN 2101 with a grade of "C" or greater. Prerequisite or corequisite: Pathway 3: ((NPN 208 and NPN 215) with a minimum grade of "C" in each course) or Consent of PN Coordinator. Practicum: 3.0 credits (135 contact hours).
Components: Practicum

NPN 2151(0.5) **Course ID: 005776**
Leadership and Management as a Professional Concept
Presents content on leadership, management, and regulatory issues for the role of practical nurse. Prerequisite: Pathway 1: (NPN 125 and NPN 130 and NPN 135 and NPN 201) with a minimum grade of "C" in each course. Pathway 2: (NPN 125 and NPN 135) with a minimum grade of "C" in each course. Pathway 3: (NPN 125 and NPN 140 and NPN 201) with a minimum grade of "C" in each course. Prerequisite or corequisite: Pathway 2: (NPN 201 and NPN 202 and NPN 206 and NPN 210) with a minimum grade of "C" in each course. Pathway 3: (NPN 208 and NPN 210) with a minimum grade of "C" in each course. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NPN 2152(0.5) **Course ID: 005777**
Role Transition from Student to Graduate Practice
Prepares the student to transition to a career in practical nursing. Prerequisite: NPN 2151. Prerequisite or corequisite: Pathway 2: (NPN 201 and NPN 202 and NPN 206 and NPN 210) with a minimum grade of "C" in each course. Pathway 3: (NPN 208 and NPN 210) with a minimum grade of "C" in each course. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NRS Nursing

NRS 100(2) **Course ID: 006616**
Enhancing Nursing Student Success
Enhances the probability of students being successful in a nursing program by fostering critical thinking skills and practice taking NCLEX-style examinations. Focuses on understanding the role of a nursing student. Addresses stress and time management as contributors to nursing student success. Pre-requisite: Active status on Kentucky Medicaid Nurse Aide Registry or its equivalent. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

NRS 101(9) **Course ID: 004332**
Nursing Care I
Establishes the foundation for competency based nursing practice by introducing beginning concepts and skills that are built upon the nursing curriculum. Introduces the four roles of nursing practice including human flourishing, human judgment, professional identity, and spirit of inquiry. Applies problem-solving and critical thinking skills in the care of clients across the life span and of diverse cultures with actual or the potential for health alterations due to common acute and chronic health problems. Includes the application of the nursing process to meet the needs of patients at the practical nursing level. Pre-requisite: Admission to the Nursing Program; Proof of active status on Kentucky Medicaid Nurse Aide Registry or its equivalent, and computer literacy; (BIO 137 and MAT 150 or higher with a grade of "C" or better); PSY 110. Pre-requisite Or Co-requisite: (BIO 139 with a grade of "C" or better) and PSY 223. Lecture: 9.0 credit hours (255 clinical hours).
Components: Clinical, Lecture
Attributes: Technical

NRS 102(10) **Course ID: 004333**
Nursing Care II
Includes the application of problem-solving and critical thinking skills in the care of clients across the life span and of diverse cultures with actual or the potential for alterations in health due to common acute and chronic health problems. Provides care of clients during the childbearing cycle focusing on common health alterations in the reproductive process. Strengthens the four roles of nursing practice including human flourishing, human judgment, professional identity, and spirit of inquiry while higher level skills are introduced. Includes an integrated clinical practicum of direct patient care in a health care facility or health care organization to facilitate the transition from student role to LPN practice. Prerequisite: NRS 101 with letter grade of "C" or better. Pre-requisite Or Co-requisite: ENG 101 and oral communications course. Lecture: 10.0 credits (300 clinical hours).
Components: Clinical, Lecture
Attributes: Technical

NRS 200(3) **Course ID: 004334**
LPN-ADN Transition
Facilitates the transition of licensed practical nurses into the nursing mobility program by building upon previous knowledge, attitudes, and cognitive and psychomotor skills using strategies of adult learning. Orients the student to the philosophy and organizing framework of the ADN Program and assists the practical nurse to make the role transition to registered nursing. Emphasizes essential concepts and beginning problem-solving skills required for registered nursing practice. Upon successful completion of all components of NRS 200, the student will be admitted to NRS 203 and earn eight (8) credit hours for NRS 101 and eight (8) hours for NRS 102 for a total of sixteen (16) credit hours. Pre-requisite: Admission to nursing program; BIO 137, BIO 139, and MAT 150 or higher with a grade of "C" or better; ENG 101,computer literacy, oral communications, (PSY 110 or PSY 100) and PSY 223. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

NRS 203(9) **Course ID: 004335**
Nursing Care III
Applies problem-solving and critical thinking skills in the care of diverse clients/families across the life span with actual or the potential for alterations in health due to complex acute and chronic health problems. Emphasizes leadership, management concepts, clinical decision-making, knowledge, judgment, skills and professional values within a legal/ethical framework. Introduces the RN responsibilities in relation to the four roles of nursing practice including human flourishing, human judgment, professional identity, and spirit of inquiry. Pre-requisite: NRS 102 with a grade of "C" or better. Pre-requisite Or Co-requisite: BIO 225 or BIO 227 with a grade of "C" or better; ENG 102. Lecture: 9.0 credits (225 clinical hours).
Components: Clinical, Lecture
Attributes: Technical

NRS 204(10) **Course ID: 004336**
Nursing Care IV
Integrates previous knowledge and skills into the development of the associate degree nurse. Focuses on the four roles of nursing practice including human flourishing, human judgment, professional identity, and spirit of inquiry with an emphasis on leadership, management, clinical decision-making, collaboration, knowledge, judgment, skills and professional values within a legal/ethical framework. Applies problem-solving and critical thinking skills in the care of diverse clients/families across the lifespan with actual or potential alterations in health due to complex acute and chronic health problems. Includes an integrated clinical practicum of direct patient care in a health care facility or health care organization to facilitate the transition from student role to RN practice. Pre-requisite: NRS 203 and (BIO 227 or BIO 225) with a grade of "C" or better. Pre-requisite Or Co-requisite: Prior to or concurrent Heritage/Humanities. Lecture: 10.0 credits (270 clinical hours).
Components: Clinical, Lecture
Attributes: Technical

NSG Nursing

NSG 100(3) **Course ID: 005269**
Preparation for Nursing
Explores careers in the nursing profession. Includes career options and educational pathways, goal setting and self-awareness, tools/strategies for success in nursing programs, and trends impacting nursing's future. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

NSG 101(9) **Course ID: 000568**
Nursing Practice I
Covers nursing practice using functional health patterns within the context of the contemporary health care delivery system. Emphasizes foundation knowledge of nursing practice, skills acquisition, and the care of patients with health perception-health management, value-belief, and rest-sleep dysfunctional health patterns. Pre-requisite: Admission to the Associate Degree Nursing program. (BIO 137 and MAT 150 or higher with a grade of "C" or better), PSY 110, 75 hour nursing assistant course or its equivalent, and Computer Literacy. Pre-requisite Or Co-requisite: BIO 139 with a grade of "C" or better and PSY 223. Lecture: 5.0 credits (75 contact hours). Clinical: 4.0 credits (180 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Technical

NSG 106(9) **Course ID: 006179**
Nursing One
Introduces and applies Gordon's Functional Health Patterns (FHP) within the context of the contemporary health care system. Emphasizes foundation knowledge of nursing practice, skills acquisition, and care of clients with risk for or actual common chronic health pattern dysfunctions. Pre-requisite: Admission to Associate Degree Nursing Program, BIO 137 (within ten years) with a grade of "C" or better, MAT 150 with a grade of "C" or better, and PSY 110. Pre-requisite Or Co-requisite: BIO 139 with a grade of "C" or better (within 10 years) and ENG 101 Lecture: 5.0 credits (75 contact hours). Clinical: 4.0 credits (180 contact hours).
Components: Clinical, Lecture
Attributes: Technical

NSG 126(3) **Course ID: 004280**
Pharmacology in Nursing
This is an elective course which studies common drugs, their classification, and their effects on functional and dysfunctional health patterns. Areas of emphasis include nursing responsibility, accountability, and application of the nursing process regarding drug therapy. Lecture: 3 hours (45 contact hours).
Components: Lecture
Attributes: Technical

NSG 196(5) **Course ID: 006180**
Nursing LPN Bridge Course
Builds upon the LVN/LPN experiences in application of core components of nursing. Focuses on the nursing care for the patient with mental health dysfunctions and the patient experiencing acute and/or chronic health pattern dysfunctions. Covers selected content and skills from Nursing One and Nursing Two. Includes the role of the Associate Degree Nurse and application of the core components of nursing practice to patient's experience. Pre-requisite: Admission to Associate Degree Nursing Program, BIO 137 and BIO 139 (within ten years) with a grade of "C" or better, MAT 150 with a grade of "C" or better, PSY 110, and ENG 101. Co-requisite: NSG 216. Pre-requisite Or Co-requisite: PSY 223 and Oral Communications Course. Clinical: 1.0 credit (45 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

NSG 197(3) **Course ID: 005907**
Transition to ADN
Builds upon the basic nursing skills and concepts learned in the LVN/LPN experience. Assists the Practical Nurse to make the beginning transition to the RN role. Includes the role of the Associate Degree Nurse and application of the course components of nursing practice to patients experiencing the dysfunctional health patterns of nutritional-metabolic and elimination. Upon successful completion of all components of the course, the student will be admitted to NSG 220 and will have earned by advanced standing, 15 credit hours in nursing. Pre-requisite: Admission to the Associate Degree Nursing Program and (BIO 137, BIO 139, and MAT 150 or higher with a grade of "C" or better), PSY 110, PSY 223, ENG 101, Oral Communications and Digital Literacy. Pre-requisite Or Co-requisite: NSG 215 and NSG 212 with a grade of "C" or better. Lecture: 2.5 credits (37.5 contact hours). Laboratory: 0.5 credit (22.5 contact hours).
Components: Clinical, Lecture
Attributes: Technical

NSG 199(2) **Course ID: 005905**
Accelerated Transition: PN-A.D.N Bridge
Admission to the Associate Degree Nursing Program and (BIO 137, BIO 139, and MAT 150 or higher with a grade of "C" or better), PSY 110, PSY 223, ENG 101, Oral Communications, Digital Literacy and a passing score on a national normed PN to RN mobility examination. Pre-requisite: Admission to the Associate Degree Nursing Program and (BIO 137 and BIO 139 and (MAT 110 or MAT 150 or higher) with a grade of "C" or better), PSY 110, PSY 223, ENG 101, Oral Communications, Computer Literacy and a passing score on a national normed PN to RN mobility examination. Co-requisite: NSG 215 and NSG 212. Lecture: 1.5 credit (22.5 contact hours) Laboratory: 0.5 credit (22.5 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

NSG 201(5) **Course ID: 000790**
LPN to ADN Bridge
This course will build upon the basic nursing skills and concepts learned in the LVN/LPN experience. The course is designed to assist the Practical Nurse to make the beginning transition to the RN role. Areas of study include the role of the Associate Degree Nurse and application of the core components of nursing practice to clients experiencing the dysfunctional health patterns of health perception-health management, value-belief, rest-sleep, activity-exercise and nutritional-metabolic. Upon successful completion of all components of the course, the student will be admitted to NSG 203 and will have earned by advanced standing, 18 credit hours in nursing. Lecture: 4 hours, Laboratory: 3 hours. Pre-requisite: BIO 137, BIO 139, MAT 150 or higher with a grade of "C" or better, PSY 110, ENG 101, and Computer Literacy.
Components: Laboratory, Lecture
Attributes: Technical

NSG 206(9) **Course ID: 006181**
Nursing Two
Includes the application of core components of nursing to clients experiencing alterations in health. Focuses on nursing care for the client with mental health dysfunctions and the client experiencing acute and/or chronic health pattern dysfunctions. Pre-requisite: NSG 106 with a grade of "C" or better. Co-requisite: NSG 216. Pre-requisite Or Co-requisite: PSY 223 and Oral Communications course. Lecture: 5 credits (75 contact hours). Laboratory/Clinical: 4 credits (180 contact hours, 45:1 ratio).
Components: Clinical, Laboratory, Lecture
Attributes: Technical

NSG 210(6) **Course ID: 005906**
Medical Surgical Nursing I
Focuses on the application of the core components of nursing to adult patients experiencing dysfunctional health patterns. Emphasizes the care of patients with nutritional-metabolic and elimination dysfunctional health patterns. Prerequisite: (NSG 101 and BIO 139) with a grade of "C" or better and PSY 223. Prerequisite or corequisite: (NSG 212 and NSG 215) with a grade of "C" or better, ENG 101 and Oral Communications. Lecture: 3.0 credits (45 contact hours). Laboratory: 3.0 credits (135 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Technical

NSG 211(3) **Course ID: 005908**
Maternal Newborn Nursing
Focuses on the application of the core components of nursing to the care of childbearing families experiencing functional and dysfunctional health patterns. Prerequisite: (NSG 210, NSG 212 and NSG 215), with a grade of "C" or higher, ENG 101 and Oral Communications. Prerequisite or corequisite: NSG 220 with a grade of "C" or higher, ENG 102, and BIO 225. Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (45 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Technical

NSG 212(3) **Course ID: 005909**
Behavioral Health Nursing
Focuses on the application of the nursing care to patients experiencing a dysfunctional health pattern. Emphasizes the care of patients with Coping-Stress-Tolerance and Altered Role-Relationship health patterns. Prerequisite: (NSG 101 and BIO 139) with a grade of "C" or higher and PSY 223. Prerequisite or corequisite: (NSG 210 and NSG 215) with a grade of "C" or higher, ENG 101 and Oral Communications Lecture: 2.0 credits (30 contact hours) Laboratory: 1.0 credit (45 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Technical

NSG 213(3) **Course ID: 005910**
Pediatric Nursing
Focuses on the application of the core components of nursing to the care of the child and family experiencing functional and dysfunctional health patterns. (Unsuccessful completion of NSG 213 will require mandatory withdrawal from NSG 230; 201 KAR 20:320). Prerequisite: (NSG 220 and NSG 211 and BIO 225) with a grade of "C" or better, ENG 102. Co-requisite: NSG 230 or consent of instructor. Prerequisite or corequisite: NSG 225 with a grade of "C" or better, and Heritage/Humanities. Lecture: 2.0 credits (30 contact hours) Laboratory: 1.0 credit (45 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Technical

NSG 215(1) **Course ID: 005911**
Pharmacology I
Focuses on common drugs, their classification and effects on functional and dysfunctional health patterns (value/belief, rest/sleep, health perception/health management, nutritional/metabolic and elimination health patterns). Emphasizes nursing responsibility, accountability, and application of the nursing process regarding drug therapy. Prerequisite: (NSG 101 and BIO 139) with a grade of "C" or higher and PSY 223. Prerequisite or corequisite: (NSG 210 and NSG 212) with a grade of "C" or higher, ENG 101 and Oral Communication. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

NSG 216(1) **Course ID: 006182**
Nursing Pharmacology I
Focuses on common drugs: classifications, indications, and effects. Emphasizes nursing implications and the use of the nursing process in medication administration with emphasis on content introduced in Nursing One and Nursing Two. Prerequisite: NSG 106 with a grade of "C" or better. Corequisite: NSG 206 or NSG 196. Prerequisite or corequisite: PSY 223 and Oral Communications course. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

NSG 220(6) **Course ID: 005912**
Medical/Surgical Nursing II
Focuses on the application of the core components of nursing to adult patients experiencing dysfunctional health patterns. Emphasizes the care of patients with activity-exercise dysfunctional health patterns (cardiac, respiratory and musculoskeletal). Prerequisite: (NSG 210, NSG 215 and NSG 212) with a grade of "C" or higher and ENG 101 and Oral Communications. Prerequisite or corequisite: (NSG 211 and BIO 225) with a grade of "C" or higher and ENG 102. Lecture: 3.0 credits (45 contact hours). Laboratory: 3.0 credits (135 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Technical

NSG 225(1) **Course ID: 005913**
Pharmacology II
Focuses on common drugs, their classification and effects on functional and dysfunctional health patterns (activity-exercise, coping/stress/tolerance, role/relationship, altered self-perception/self-concept, and cognitive perceptual). Emphasizes nursing responsibility, accountability and application of the nursing process regarding drug therapy. (Unsuccessful completion of NSG 225 will require mandatory withdrawal from NSG 230; 201 KAR 20:320). Prerequisite: (NSG 220 and NSG 211 and BIO 225) with a grade of "C" or higher) and ENG 102. Co-requisite: NSG 230 or consent of instructor. Prerequisite or corequisite: Heritage/Humanities/Foreign Language and NSG 213. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

NSG 226(1) **Course ID: 006183**
Nursing Pharmacology II
Focuses on common drugs: classifications, indications, and effects. Emphasizes nursing implications and the use of the nursing process in medication administration with emphasis on content introduced in Nursing Three and Nursing Four. Prerequisite: (NSG 206 and NSG 216) with a grade of "C" or better. Corequisite: NSG 236. Prerequisite or corequisite: BIO 225 (within ten years) with a grade of "C" or better and ENG 102. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

NSG 230(6) Course ID: 005914
Medical/Surgical Nursing III
Focuses on the application of the core components of nursing to adult patients experiencing dysfunctional health patterns. Emphasizes the care of patients with cognitive/perceptual, altered self perception/self concept, management of patients with dysfunctional health patterns: neurological, eyes/ears, immune/cancer, multiple systems organ failure, and disaster planning. Role transition is addressed and emphasizes leadership, management of care, skill development and professionalism. NSG 230 is the capstone course and must be successfully completed in the final semester of the associate degree nursing program enrollment. (201 KAR 20: 320). Prerequisite: (NSG 220 and NSG 211 and BIO 225) with a grade of "C" or higher and ENG 102. Pre-requisite or co-requisite: NSG 213, NSG 225, Heritage/Humanities/Foreign Language. Lecture: 3.0 credits (45 contact hours) Laboratory: 3.0 credits (135 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Technical

NSG 236(9) Course ID: 006184
Nursing Three
Includes application of the core components of nursing to the care of child-bearing and child-rearing families experiencing functional and dysfunctional health patterns. Pre-requisite: (NSG 206 and NSG 216) with a grade of "C" of better. Co-requisite: NSG 226. Pre-requisite or co-requisite:BIO 225 (within ten years) with a grade of "C" or better and ENG 102. Lecture: 5.0 credits (75 contact hours) Laboratory/Clinical: 4.0 credits (180 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

NSG 246(9) Course ID: 006185
Nursing Four
Emphasizes the development of the nurse as a provider of care, manager of care, and member of the nursing profession. Provides for the application of critical thinking skills in the care of diverse patients/families across the lifespan with actual or potential alteration in health due to complex acute and chronic health problems. Includes an integrated practicum with an emphasis on leadership, management, clinical judgment, collaboration, knowledge, skills, and professional values within the legal/ethical framework to facilitate the transition of the student to Registered Nurse practice. Pre-requisite: (NSG 236 and NSG 226) with a grade of "C" or better. Pre-requisite or Co-requisite: Heritage/Humanities/Foreign Language. Lecture: 5.0 credits (75 contact hours). Laboratory/Clinical: 4.0 credits (180 contact hours, 45:1 ratio).
Components: Clinical, Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

NSG 270(3) Course ID: 004293
Genetic Disorders
Introduction to various genetic disorders which health care workers are likely to see during their careers. Specific areas of study include basic genetic concepts, inheritance modalities, genetic disorders, and their direct impact on nursing care. Follows up on information obtained in Anatomy and Physiology, high school science, and basic biology classes presently offered by KCTCS.
Components: Lecture
Attributes: Technical

NSG 295(3) Course ID: 005782
Healthcare Cultural Immersion Experience
Introduces health care providers to cultural values, beliefs, practices, and communication patterns of a chosen culture through an immersion experience. Focuses on basic cultural vocabulary and on behaviors, beliefs, and nursing and health care practices of the chosen population. May be conducted in a country native to the chosen cultural group. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

NSG 298(3) Course ID: 004434
Alternative and Complementary Therapies
This is an elective course that focuses on the impact of alternative and complementary therapies in nursing practice. Holistic nursing is emphasized, as well as the nurse's role in enhancing healing of the whole person from birth to death. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

NSG 299(1 - 4) Course ID: 000531
Instructor Consent Required
Selected Topics in Nursing: (Topic)
Various nursing topics, issues, and trends will be addressed. Topics may vary from semester to semester at the discretion of the instructors; courses may be repeated with different topics to a maximum of six credit hours. Lecture: Varies by topic; Laboratory: Varies by topic. Prerequisite: Consent of instructor.
Components: Laboratory, Lecture
Attributes: Technical

OST Administrative Office Technology

OST 100(1) Course ID: 003768
Keyboarding
Develops skill operating a keyboard by touch. Lab: 1.0 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

OST 101(3) Course ID: 004926
Keyboarding & Intro to Document Formatting
Develops skill in operating a keyboard by touch and to develop an introductory level of skill producing standard business documents using a word processing program with speed and accuracy. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

OST 105(3) Course ID: 003769
Introduction to Information Systems
Introduces and familiarizes students with essential computer concepts and terminology including operating systems software, multitasking concepts, disk and file management and telecommunications. Teaches basic competencies in word processing, electronic spreadsheets, presentations, databases, and online skills including networking, electronic mail, Web browsing, and Internet research. (Key 20 wpm is recommended). Pre-requisite: RDG 020. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Digital Literacy, Course Also Offered in Modules

OST 108(3) Course ID: 004521
Editing Skills for Office Professionals
A hands-on approach to editing business documents. Applies proper placement and structure of business documents. Reviews principles of grammar, punctuation, vocabulary, spelling, word and number usage, and proofreading rules. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

OST 109(3) Course ID: 004520
Legal Terminology
Introduces the judicial system (discovery, trial, and appellate processes), civil law, criminal law, legal terminology and legal citations commonly used in the legal field. Includes terms and how to use them in legal context. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

OST 110(3) Course ID: 003770
Instructor Consent Required
Document Formatting and Introduction to Word Processing
Provides experience in word processing including the mastery of touch typing with speed and accuracy using industry standard software. Prerequisite: RDG 020 and Consent of Instructor (OST 101 equivalent skills). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

OST 110(1) Course ID: 016820
Career Planning
Studies the practice and procedures of current office concepts including job application procedures, goal setting, and professionalism. Pre-requisite OR Co-requisite: OST 110. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

OST 112(3) Course ID: 004428
Financial Management
Designed to teach students fundamental principles and concepts including: financial markets, futures, bonds, commodities, interest rates, and taxes. The primary emphasis is short and long term financial planning along with interpretation of financial information. Careers in the financial industry discussed. Lecture: 3 credits (45 contact hours).
Components: Lecture

OST 113(1) Course ID: 005270
Speedbuilding
Presents techniques for increased keyboarding speed and accuracy. Lecture: 1 credit (15 contact hours). Prerequisite: OST 100 or equivalent as determined by typing competency test.
Components: Lecture
Attributes: Technical

OST 130(3) Course ID: 004518
Typography
Introduces the principles of typography, type basics, type aesthetics, how to design with type, parameters of type and how they can be used to produce quality type. Utilizes advanced commands and pagination composition skills. Studies grids, file management and other options such as design standards with business publications. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

OST 150(3) Course ID: 003771
Transcription and Office Technology
Produce usable business documents from machine dictation using word processing software, with emphasis on spelling, punctuation, and grammar. Proofreading and editing applications stress the importance of accuracy and quality of document creation and production. Demonstration of office machines will be incorporated. Lecture: 3 hrs; Laboratory: 0. Prerequisite: ENG 101 or Permission of Instructor and OST 110
Components: Lecture
Attributes: Technical

OST 160(3) Course ID: 003772
Records and Database Management
Presents aspects of the management of records from creation to disposal, using database software to create and edit files and prepare reports. Prerequisite: OST 105. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

OST 210(3) Course ID: 003773
Advanced Word Processing Applications
Uses advanced features of a current word processing software to format and produce documents utilized in an office. Prerequisite: OST 110. Lecture: 3.0 credit hours. (45 contact hours).
Components: Lecture
Attributes: Technical

OST 213(3) Course ID: 004517
Business Calculations for The Office Professional
Applies skills required for the performance of business tasks: use of numeric keypad to compute payroll, markup/markdown, purchases, loans, discounts, stock and bond transactions; and other business applications. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

OST 215(3) **Course ID: 003774**
Office Procedures
Studies the practices and procedures of current office concepts with emphasis given to the electronic office including: job application procedures, human relations in the office, business ethics, decision-making skills, travel and meeting arrangements, time and stress management, incoming/outgoing mail processes, and telephone procedures. Prerequisite Or Corequisite: OST 110. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

OST 216(1 - 6) **Course ID: 004515**
Selected Topics
Expands course offerings to address local office issues as new technology is developed. Varies from semester to semester at the discretion of the instructor; may be repeated with different topics to a maximum of six credit hours. Lecture: 1-6 hours (15-90 contact hours).
Components: Lecture
Attributes: Technical

OST 220(3) **Course ID: 003775**
Administrative Office Simulations
Applies administrative procedures office simulations to include organizing, communicating, scheduling, and analyzing. Emphasizes productivity, efficiency, accuracy, and problem solving. Uses technology to research information on the Internet and send and receive e-mail. Continues to develop speed and accuracy. Prerequisite: OST 210, OST 215, and OST 240, or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

OST 221(3) **Course ID: 005469**
Legal Office Simulation
Applies classroom experiences and skills in a simulated legal office environment. Prerequisite: OST 110. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

OST 225(3) **Course ID: 003776**
Introduction to Desktop Publishing
Uses desktop publishing software to design and produce high resolution publications such as flyers, brochures, business forms, and newsletters. Introduces basic design techniques, type and graphics layout, and related terminology. Prerequisite: (OST 105 and OST 110) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

OST 235(3) **Course ID: 003777**
Business Communications Technology
Presents aspects of communications technology used in the global business environment, including presentations software; a basic understanding of voice recognition software; planning and composition of written, oral, and electronic communications; grammar, punctuation, and spelling; and principles of proofreading, both manual and electronic. Prerequisite: (ENG 101 or OST 108) and (CIT 105 or OST 105). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

OST 240(3) **Course ID: 003778**
Software Integration
Expands computer skills through the use of spreadsheet, database management, word processing, and presentation software for the integration of information. Prerequisite: CIT 105 or OST 105. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

OST 250(3) **Course ID: 004514**
Advanced Desktop Publishing
Provides advanced techniques in electronic publishing design, layout, composition and paste-up. Prerequisite: OST 225 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

OST 255(3) **Course ID: 004425**
Introduction to Business Graphics
Provides instruction in the process of image-editing including how to create original artwork, manipulate color, enhance artwork, graphics and retouch photographs and clipart used in desktop publishing programs. Prerequisite: OST 105 or OST 225 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

OST 272(3) **Course ID: 004511**
Presentation Graphics
Uses industry standard software to create business presentations, business graphics, transparencies, and slides. Applies editing, formatting, page layout and design, and paste-up techniques for clarity and impact. Prerequisite: OST 105. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

OST 275(3) **Course ID: 003779**
Office Management
Management principles and techniques and their applications to the modern business office are included. Emphasis is on information systems and the role of managerial personnel. Lecture: 3 credits. Laboratory: 0 credits.
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

OST 295(1 - 3) **Course ID: 003780**
Instructor Consent Required
Administrative Office Technology Internship
Provides the opportunity to apply acquired occupational skills in a realistic setting, enhancing the transition from school to work. Requires approval of OST advisor. Prerequisite: OST 210, OST 215, and OST 240, or consent of instructor. Laboratory: 1.0 - 3.0 credits (45-135 contact hours).
Components: Laboratory
Attributes: Technical

OST 296(3) **Course ID: 004505**
Instructor Consent Required
Office Systems Technology Internship II
Enhances transition from school to work by providing non-paid work experience which utilizes the skills required to achieve occupational goal. Prerequisite: Consent of Program Adviser. Practicum: 3 credits (135 contact hours).
Components: Practicum
Attributes: Technical

OST 1101(1) **Course ID: 016303**
Word Processing Functions
Provides basics of word processing including the information processing cycle, using spell check, proofreading and keypad accuracy using industry standard software. Pre-requisite: RDG 020 or Consent of Instructor (OST 101 equivalent skills). Lecture: 1 credit (15 contact hours).
Components: Lecture

OST 1102(1) **Course ID: 016304**
Document Letters Memoranda
Provides experience in word processing for keying letters and memoranda using industry standard software. Pre-requisite: OST 1101 or Consent of Instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

OST 1103(1) **Course ID: 016305**
Document Tables and Reports
Provides experience in word processing for keying tables and reports from reference materials using industry standard software. Pre-requisite: OST 1102 or Consent of Instructor. Lecture: 1 credit (15 contact hours)
Components: Lecture

OST 1601(1) **Course ID: 016814**
Intro to Records Management
Describe and demonstrate the importance and specifics of record management requirements as well as specific career information. Pre-requisite OR Co-requisite: OST 105. Lecture: 1.0 credits (15 contact hours)
Components: Lecture

OST 1602(1) **Course ID: 016815**
Intro to Database Management
Identify ways to file and retrieve documents and compare automated and manual ways to store records. Pre-requisite OR Co-requisite: OST 105. Lecture: 1.0 credits (15 contact hours)
Components: Lecture

OST 1603(1) **Course ID: 016816**
Records and Database Mgmt Tech
Analyze automated techniques and describe the life cycles of stored records. Demonstrate skills related to all aspects of database filing. Pre-requisite OR Co-requisite: OST 105. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

OST 2101(1) **Course ID: 016306**
Advanced Formatting and Tools
Uses advanced formatting features and Word Processing Tools of a current word processing software. Pre-requisite: OST 110. Lecture: 1 credit (15 contact hours)
Components: Lecture

OST 2102(1) **Course ID: 016307**
Print and File Management
Uses advanced features of a current word processing software to manage file management, printing, and editing. Pre-requisite: OST 2101 or Consent of Instructor. Lecture 1 credit (15 contact hours).
Components: Lecture

OST 2103(1) **Course ID: 016308**
Advanced Word Processing Tools
Uses advanced features of a current word processing software to format tables, insert graphics and clipart, and forms. Pre-requisite: OST 2102 or Consent of Instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

OST 2151(1) **Course ID: 016851**
Career Planning
Studies the practice and procedures of current office concepts including job application procedures, goal setting, and professionalism. Pre-requisite OR Co-requisite: OST 110. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

OST 2152(1) **Course ID: 016821**
Key Office Procedure Skills
Emphasizes specific techniques and skills needed for an office setting including mail procedures, communication and public relations, business ethics and etiquette. Pre-requisite: OST 2151. Pre-requisite OR Co-requisite: OST 110.
Components: Lecture

OST 2153(1) **Course ID: 016822**
Decision Making Methods
Studies the practice and procedures of current office concepts including decision-making skills, problem-solving techniques, travel and meeting arrangements, and time and stress management. Pre-requisite: OST 2152. Pre-requisite OR Co-requisite: OST 110. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

OST 2251(1) **Course ID: 016309**
Desktop Publishing Software
Uses desktop publishing software to design and produce high resolution publications such as flyers, brochures, business forms, and newsletters. Introduces basic design techniques, type and graphics layout, and related terminology. Pre-requisite: (OST 105 and OST 110) or Consent of Instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

OST 2252(1) **Course ID: 016310**
Desktop Publishing Design and Features
Uses desktop publishing software to design and produce high resolution publications such as flyers, brochures, business forms, and newsletters. Introduces basic design techniques, type and graphics layout, and related terminology. Pre-requisite: OST 2251 or Consent of Instructor. Lecture: 1 credit (15 contact hours)
Components: Lecture

OST 2253(1) **Course ID: 016311**
Desktop Publishing Applications
Uses desktop publishing software to design and produce high resolution publications such as flyers, brochures, business forms, and newsletters. Introduces basic design techniques, type and graphics layout, and related terminology.
Components: Lecture

OST 2501(1) **Course ID: 016823**
Intro to Adv Desktop Publishing
Demonstrate methods of creating quality publications using desktop publishing software. Pre-requisite OR Co-requisite: OST 225. Lecture: 1.0 credits (15 contact hours)
Components: Lecture

OST 2502(1) **Course ID: 016824**
Using Graphics for Publication
Create and design desktop publishing documents using a variety of graphics. Pre-requisite: OST 2501. Pre-requisite OR Co-requisite: OST 225. Lecture: 1.0 credits (15 contact hours)
Components: Lecture

OST 2503(1) **Course ID: 016825**
Creating Superior Publications
Design and create superior publications using desktop publishing software. Pre-requisite: OST 2502 Pre-requisite OR Co-requisite: OST 225. Lecture 1.0 credits (15 contact hours)
Components: Lecture

OST 2751(0.5) **Course ID: 005806**
Office Management Principles
Includes introductory management principles and techniques for the modern business office. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

OST 2752(1) **Course ID: 005807**
Managing Human Resources in the Office
Includes management principles and techniques and their application to the management of human resources in the modern business office. Prerequisite: OST 2751. Lecture: 1 credit (15 contact hours).
Components: Lecture

OST 2753(0.5) **Course ID: 005808**
Managing Office Administrative Services
Management principles and techniques for the modern business office as they apply to the development of an information system and the management of physical resources are included. Prerequisite: OST 2751. Lecture: 0.5 credit. (7.5 contact hours).
Components: Lecture

OST 2754(1) **Course ID: 005809**
Managing Office Administrative Systems
Includes quality management principles and techniques for the administrative systems in a modern business office. Prerequisite: OST 2751. Lecture: 1 credit. (15 contact hours).
Components: Lecture

OTA Occupational Therapy Assistant

OTA 101(3) **Course ID: 006868**
Introduction to Occupational Therapy
Introduces the profession of occupational therapy by examination of history, philosophy, and theoretical foundations. Examines roles of Occupational Therapist (OT) and Occupational Therapy Assistant (OTA) with respect to education, credential, employment settings, and ethics. Outlines usage of Occupational Therapy Practice Framework, medical terminology, group dynamics, and communication skills. Pre-requisite: Admission to OTA program or permission of instructor. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

OTA 113(2) **Course ID: 006869**
Applied Anatomy and Kinesiology
Studies the musculoskeletal and nervous systems of the human body in relationship to movement and function. Emphasizes the upper extremity and shoulder girdle. Focuses on innervation of muscles, muscle grouping for function, and common problems seen when these systems are affected by disease/injury. Introduces the analysis of movement in specific life tasks. Uses the goniometer for joint measurement, manual muscle testing for strength, and promotes familiarity with the terms and techniques used in assessing motor function. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 2.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

OTA 115(2) **Course ID: 006881**
Skills and Interventions I
Develops the basic foundational principles/applications of occupational therapy, such as the concept of basic needs, therapeutic interventions, techniques, applications, analysis, safety, and adaptive skill development as the basics of an individual's occupational performance. Provides explanation and introductory lab practice of the occupational therapy assistant elements. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 2.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

OTA 116(2) **Course ID: 006882**
Media Principles and Procedures I
Develops skills in planning, implementing and evaluating occupational therapy for individuals experiencing deficits in occupational performance through the analysis of human occupation and subsequent methods of remediating, compensating, grading, and/or modifying activities and environments for optimal occupational performance. Develops communication skills necessary for documentation and patient interaction. Focuses on appropriate treatment and need for awareness of ethnic, cultural, and socio-economic factors that impact individuals. Provides opportunities for students to develop skills in activity analysis, functional mobility, therapeutic crafts, and modalities. Pre-requisite: Admission to OTA program and permission of instructor. Lab: 2.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

OTA 125(2) **Course ID: 006883**
Assistive Technology and Documentation
Presents various methods of documentation used in occupational therapy settings for evaluation, intervention, justification of payment for equipment, discharge, and other client records, and requirements of third party payers. Explores assistive technology to facilitate knowledge in a broad range of devices, services, strategies, and practices conceived and applied to decrease the problems faced by individuals. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 2.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

OTA 126(1) **Course ID: 006870**
Level IA Fieldwork
Provides the opportunity to observe and participate in various settings appropriate to occupational therapy service but not necessarily within a therapy department or under an occupational therapy professional. Provides opportunities to develop entry-level skills in the occupational therapy process with hands-on interaction as appropriate. Encourages development of professional behaviors and effective communication skills. Pre-requisite: Admission to OTA program and permission of instructor. Clinical: 1.0 credit (60 contact hours).
Components: Clinical
Attributes: Technical

OTA 136(4) **Course ID: 006871**
Physical Dysfunction
Includes study of physical conditions commonly seen by Occupational Therapy, including diagnoses, instruction on treatment, and application of treatment. Introduces practice models to guide treatment applications, including procedures for multiple conditions in physical dysfunction. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 4.0 credits (120 contact hours).
Components: Lecture
Attributes: Technical

OTA 146(3) **Course ID: 006872**
Occupational Therapy in Mental Health
Presents typical and dysfunctional behavior using the occupational therapy process as it pertains to mental health practice settings. Explores alternative methods and settings for mental health practice. Covers training and practice in interpersonal skills necessary for effective communication with clients, families, significant others, other health care professionals, and the public. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 3.0 credits (75 contact hours).
Components: Lecture
Attributes: Technical

OTA 206(2) **Course ID: 006873**
Community Practice
Explores the current and emerging practice areas of occupational therapy in the immediate and future needs. Focuses on occupation-based practice, holism, wellness, and prevention models applied throughout the lifespan. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 2.0 credits (60 contacts)
Components: Lecture
Attributes: Technical

OTA 216(2) **Course ID: 006884**
Media Principles and Procedures II
Provides students the opportunity to apply skills in evaluating and planning occupational therapy for individuals experiencing deficits in occupational performance in a safe and efficient manner. Develops assessment skills in order to plan appropriate treatments applicable to deficits in occupational performance, including fabrication of orthotics and adaptive equipment and techniques. Develops communication skills necessary for documentation and patient interaction. Provides opportunities for students to develop skills in assessment, adaptations, orthotics and appropriate treatment with awareness of ethnic, cultural, and socio-economic factors that impact individuals. Pre-requisite: Admission to OTA program and permission of instructor. Lab: 2.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

OTA 225(2) **Course ID: 006885**
Skills and Interventions II
Incorporates analysis, instruction and implementation of occupational therapy treatment techniques. Provides opportunities to apply theoretical concepts in practice situations, involving higher-level activities of daily living, comprehensive analysis, purposeful activity, modalities and neurological re-education. Applies implementation skills necessary for level II fieldwork and to work as entry-level occupational therapy assistant. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 2.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

OTA 226(1) **Course ID: 006874**
Level IB Fieldwork
Provides the opportunity to observe and participate in various settings appropriate to occupational therapy service but not necessarily within a therapy department or under an occupational therapy professional. Provides opportunities to develop intermediate skills in the occupational therapy process. Provides opportunities for students to advance therapeutic skills and to generalize skills and knowledge from the classroom to the practice setting. Hones professional behaviors and communication skills established in previous occupational therapy classes. Pre-requisite: Admission to OTA program and permission of instructor. Clinical: 1.0 credit (60 contact hours).
Components: Clinical
Attributes: Technical

OTA 236(2) **Course ID: 006875**
Professional Transitions and Management
Explores professional issues related to the transition from student to practitioner, the relationships the occupational therapy assistant (OTA) has with other health care professionals, identification of licensure and certification requirements, professional memberships, job search strategies, methods of reimbursement, and formulation of professional resources to become a successful entry level therapist. Pre-requisite: Admission to OTA program and permission of instructor. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

OTA 246(3) **Course ID: 006876**
Pediatric Issues in Occupational Therapy
Examines occupational therapy in the pediatric population. Investigates how physical, emotional, and cognitive processes begin, change, and develop from birth through adolescence. Addresses concepts of occupation in pediatrics. Encourages students to view treatments holistically while learning normal developmental milestones and various disabilities. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 3.0 credits (75 contact hours).
Components: Lecture
Attributes: Technical

OTA 256(2) **Course ID: 006877**
Elder Issues in Occupational Therapy
Explores the concerns for occupational therapy in the aging population. Examines how physical, emotional and cognitive processes change through adulthood. Discusses the concepts of occupational therapy throughout the life span employing a holistic approach to intervention. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 2.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

OTA 266(5) **Course ID: 006878**
Level IIA Fieldwork
Provides opportunity to function in various clinical settings under supervision of experienced occupational therapy practitioner. Promotes collaboration with the Occupational Therapist in planning/implementation of treatment programs with clients with a variety of diagnoses and ages. Cultivates skills necessary to function at entry-level of practice through the first of two successive fieldwork rotations in unique healthcare settings/institutions. Pre-requisite: Admission to OTA program and permission of instructor. Practicum: 5.0 credits (300 contact hours).
Components: Practicum
Attributes: Technical

OTA 267(5) **Course ID: 007410**
Level IIA Fieldwork
Provides opportunity to function in various clinical settings under supervision of experienced occupational therapy practitioner. Promotes collaboration with the Occupational Therapist in planning/implementation of treatment programs with clients with a variety of diagnoses and ages. Cultivates skills necessary to function at entry-level of practice through the first of two successive fieldwork rotations in unique healthcare settings/institutions. Pre-requisite: Admission to the Occupational Therapy Assistant Program or permission of instructor. Practicum: 5.0 credits (300 contact hours).
Components: Practicum
Attributes: Technical

OTA 276(5) **Course ID: 006879**
Level IIB Fieldwork
Provides opportunity to function in various clinical settings under supervision of experienced occupational therapy practitioner. Promotes collaboration with the Occupational Therapist in planning/implementation of treatment programs with clients with a variety of diagnoses and ages. Strengthens complex skills, including critical thinking, required for entry-level of practice through the final of two successive fieldwork rotations in unique healthcare settings/institutions. Pre-requisite: Admission to OTA program and permission of instructor. Practicum: 5.0 credits (300 contact hours).
Components: Practicum

OTA 277(5) **Course ID: 007411**
Level IIB Fieldwork
Provides opportunity to function in various clinical settings under supervision of experienced occupational therapy practitioner. Promotes collaboration with the Occupational Therapist in planning/implementation of treatment programs with clients with a variety of diagnoses and ages. Strengthens complex skills, including critical thinking, required for entry-level of practice through the final of two successive fieldwork rotations in unique healthcare settings/institutions. Pre-requisite: Admission to the Occupational Therapy Assistant Program or permission of instructor. Practicum: 5.0 credits (300 contact hours).
Components: Practicum
Attributes: Technical

OTA 286(2) **Course ID: 006880**
Clinical Seminar
Provides students an opportunity to share information from their clinical site with both the academic instructor and their classmates. Emphasizes application of information learned to other situations. Prepares students for National Board for Certification in Occupational Therapy (NBCOT) certification examination. Pre-requisite: Admission to OTA program and permission of instructor. Co-requisite: OTA 266 OR OTA 276. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

PGL Paralegal Technology

PGL 111(3) **Course ID: 007051**
Legal Systems and Terminology
Provides an overview of major principles and functions of the state and federal legal systems, introduces various legal fields for professional opportunities, presents legal vocabulary, gives an overview of different areas of law, and presents ethics. Pre-requisite: ACT, COMPASS, or ASSET scores for college level reading and writing OR completion of Transitional reading and writing courses. Co-requisite: PGL 112. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PGL 112(3) **Course ID: 007052**
Legal Research
Introduces the basic sources of law and methods of legal research, including ethics. Pre-requisite: ACT, COMPASS, or ASSET scores for college level reading and writing OR completion of Transitional reading and writing courses. Co-requisite: PGL 111. Lecture: 3.0 credits (45 contact hour).
Components: Lecture
Attributes: Technical

PGL 113(3) **Course ID: 007053**
Law Office Management
Provides practical application of daily legal office skills needed in the legal field, professional enrichment presentations, history of the profession, professional ethics through fact analysis, and an overview of law office management. Pre-requisite: ACT, COMPASS, or ASSET scores for college level reading and writing OR completion of Transitional reading and writing courses. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PGL 211(3) **Course ID: 007054**
Family Law
Examines the areas of law pertaining to domestic relations, emphasizing ethics. Pre-requisite: PGL 111 and PGL 112. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PGL 212(3) **Course ID: 007055**
Legal Writing
Includes composition of legal communications, briefs, memoranda, and other legal documents, with an emphasis on ethical considerations. Pre-requisite: PGL 111 and PGL 112. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PGL 213(3) **Course ID: 007056**
Civil Litigation I
Presents the litigation process and emphasizes the structure of the court systems. Includes gathering information and evidence, summarizing and arranging materials, maintaining docket and file control, developing a litigation case, and interviewing clients and witnesses, using ethical standards. Pre-requisite: PGL 111 and PGL 112. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PGL 214(3) **Course ID: 007057**
Real Property I
Introduces real property law including ownership, transfer of property, liens and encumbrances, and the various types of deeds. Pre-requisite: PGL 111 and PGL 112. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PGL 221(3) **Course ID: 007058**
Wills and Estates
Introduces the laws of inheritance and estates, basic concepts of estates and wills, probate procedures, and preparation of documents while emphasizing ethics. Pre-requisite: PGL 111 and PGL 112. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PGL 223(3) **Course ID: 007059**
Civil Litigation II
Continues the study of the litigation process from discovery through appeal. Emphasizes collecting and organizing discovery materials and demonstrating knowledge of the limits placed on discovery by the federal and state rules of civil procedure. Includes the trial and appeal phases of litigation, with emphasis on trial preparation and appellate procedure. Pre-requisite: PGL 213. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PGL 224(3) **Course ID: 007060**
Real Property II
Examines legal documents related to real property as recorded in the clerk's office, the tax assessor's office, and the circuit clerk's office. Includes compiling a title abstract and completing an assignment to prepare a real estate file from transaction through closing and post-closing, implementing ethics. Pre-requisite: PGL 214. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PGL 231(3) **Course ID: 007061**
Torts
Provides instruction in the area of law that deals with civil wrongs and injuries, including intentional wrongs, negligence, and strict liability. Concentrates on the elements of a tort, type of tort, damages, ethics, and remedies. Pre-requisite: PGL 111 and PGL 112. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PGL 233(3) **Course ID: 007062**
Ethics
Provides an overview of the various sources of ethics law and rules, along with the essentials of how and why a legal professional must report misconduct. Explores the types of discipline an ethical lapse may trigger, such as sanctions, disqualification, civil and criminal liability, and what it means to be engaged in the "unauthorized practice of law." Pre-requisite: PGL 111 and PGL 112. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PGY Physiology

PGY 206(3) **Course ID: 000846**
Elementary Physiology
An introductory survey course in basic human physiology. Prerequisite: One semester of college biology. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: University Course (University of Kentucky)

PHA Pharmacy

PHA 104(2) **Course ID: 004160**
Parenterals
A basic understanding of working with admixtures. Focuses on aseptic technique and basic sterile compounding. Lecture: 1 credit (15 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

PHA 110(6) **Course ID: 004159**
Pharmacy Procedures and Skills
Introduces the field of pharmacy. Includes pharmacy technician responsibilities, legal requirements, safety issues, and basic skills of a pharmacy technician. Lecture: 4.0 credits (60 contact hours). Lab: 2.0 credits (90 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

PHA 125(2) **Course ID: 004161**
Pharmaceutical Calculations
Covers basic math review, percentage strengths, ratio and proportion, conversion between the apothecary and metric systems, and intravenous calculations. Focus is on equivalencies and calculation of drug dosages. Prerequisite: MAT 065 or equivalent. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

PHA 136(3) **Course ID: 001930**
Pharmacology
Introduces the study of drugs and their effect on the human body. Emphasis is placed on the most commonly used drugs, their dosage and common side effects as well as any adverse reactions that might occur. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PHA 200(3) **Course ID: 001931**
Admixtures for IV Therapy
Provides a basic working knowledge for the pharmacy technician involved in the preparation of IV admixtures. Prerequisite: (PHA 110 and PHA 136 and PHA 125) with a grade of "C" or greater. Corequisite: PHA 205 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PHA 205(1) **Course ID: 001932**
Admixture Preparations
Provides the opportunity to become proficient in the techniques of IV admixing and in the use of related equipment associated with sterile product preparation. Prerequisite: (PHA 110 and 136) with a grade of "C" or greater). Corequisite: PHA 200 or Consent of Instructor. Lab: 1.0 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

PHA 210(6) **Course ID: 001934**
Drug Classifications
Provides a study of the principles and classifications, drug nomenclature, and dosage forms as related to conditions of the body. Prerequisite: (PHA 110 and 136 with a grade of "C" or greater). Corequisite: PHA 205 or Consent of Instructor. Lecture: 6.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

PHA 250(1 - 8) **Course ID: 001936**
Instructor Consent Required
Pharmacy Experience
Provides work experience in the pharmacy setting to enhance skills required to reach occupational goals for the pharmacy technician. Prerequisite: Consent of Instructor. Clinical: 1.0 - 8.0 credits (60-480 contact hours).
Components: Clinical
Attributes: Technical

PHB Phlebotomy

PHB 100(6) **Course ID: 001938**
Phlebotomy
Prepares the student as an integral member of the health-care team to collect blood from patients/donors in hospitals, blood banks or clinics for analysis or other medical purposes. Includes standard precautions, record keeping, and therapeutic communication skills. Lecture/Lab: 6.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

PHB 120(6) **Course ID: 003809**
Fundamentals of Clinical Laboratory Phlebotomy
Fundamental techniques of areas of the clinical laboratory appropriate to the phlebotomist are introduced. Included is a study of medical ethics, medical terminology, anatomy and physiology of the circulatory system, professional organizations, communication, record keeping, specimen collection, chain of custody, laboratory safety, and quality control. Lecture: 3 hrs; Laboratory: 9 hrs. Prerequisite: CPR Certification, Malpractice insurance, Hepatitis, Varicella, PPD, Rubeola, and Rubella blood work results.
Components: Laboratory, Lecture
Attributes: Technical

PHB 151(1) **Course ID: 004072**
Instructor Consent Required
Phlebotomy for the Health Care Worker
Covers fundamental techniques in proper venipuncture and capillary collection. Includes a study of medical ethics, laboratory terminology, anatomy and physiology of the circulatory system, communication and record keeping, specimen processing, laboratory safety, isolation procedures and special collection. Lecture/Lab: 1.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

PHB 152(1) **Course ID: 004175**
Phlebotomy: Clinical Experience
Introduces the student to clinical practice in the phlebotomy department of a laboratory. The student will begin to develop performance skills in routine venipuncture and capillary collection procedures emphasizing performance skills in routine venipuncture and capillary collection procedures. Prerequisite Or Co-requisite: PHB 151, PHB 170 or MAI 120. Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: Technical

PHB 153(4) **Course ID: 004479**
Advanced Topics in Phlebotomy
Prepares the student as an integral member of the health-care team. One who collects blood from patients/donors in hospitals, blood banks or clinics for analysis or other medical purposes. Practices standard precautions, record keeping, vital signs and therapeutic communication skills. Prerequisite: PHB 151 Phlebotomy for the Healthcare Worker. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

PHB 155(2 - 3) **Course ID: 001939**
Phlebotomy Clinical
This course is designed to build on the knowledge acquired in phlebotomy lecture and lab. In this course the student will use external institutions for clinical experience to become more proficient in the performance of routine venipuncture and dermal collections. The student will gain the experience needed to handle routine venipuncture complications and the skills necessary to adequately perform the duties of a phlebotomist. Pre-requisite: PHB 151 Phlebotomy for the Healthcare Professional, PHB 100 Phlebotomy, or PHB 170 Applied Phlebotomy Lecture/Lab: 2.0 - 3.0 credits (120 - 180 contact hours).
Components: Lecture
Attributes: Technical

PHB 170(3) **Course ID: 006441**
Applied Phlebotomy
Teaches proper techniques in venipuncture and capillary collection. Includes a study of medical ethics, laboratory terminology, anatomy and physiology of the circulatory system, communication and record keeping, specimen processing, laboratory safety, isolation procedures, special collection procedures, specimen processing for the various laboratory departments, venipuncture complications, and quality assurance. Pre-requisite: Permission of the MLT Program Director/MLT Clinical Coordinator. Co-requisite: PHB 152. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

PHI Philosophy

PHI 100(3) **Course ID: 000894**
Introduction to Philosophy: Knowledge and Reality
Introduces students to philosophical studies with emphasis on issues of knowing, reality, and meaning related to human existence. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

PHI 110(3) **Course ID: 002202**
Medical Ethics
Introduces examination and application of major ethical theories to specific moral questions related to health care. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

PHI 120(3) **Course ID: 000356**
Introductory Logic
Covers argumentation, syllogistic and sentential logic. Focuses on the use of formal methods in the construction and criticism of actual arguments, the aim being to inculcate standards of good reasoning, e.g., clarity, consistency, and validity. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

PHI 130(3) **Course ID: 000354**
Ethics
Introduces students to a critical examination of philosophical principles related to moral action and political values. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

PHI 140(3) **Course ID: 005139**
The Ethics of War and Peace
Ethical reasoning and application of ethical theories to moral issues connected to war and peace. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

PHI 150(3) **Course ID: 000359**
Business Ethics
Presents ethical theories and techniques of moral reasoning used to analyze moral issues in business. Applies ethics and reasoning to current issues of management, employees, government, public safety, and the environment. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

PHI 160(3) **Course ID: 015595**
Philosophy Through Pop Culture
Surveys major philosophical themes, such as value, morality, evil, friendship, beauty, God, reality, and the meaning of life, and applies these themes to an examination of how they are represented in several sources of popular culture, including literature, film, art, music, media, and stage. Pre-requisite: ENG 101. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

PHI 170(3) **Course ID: 016632**
Philosophy of Religion
Introduces students to issues in philosophy of religion including defining the concept of God, arguments for and against the existence of God, the relation between faith and reason, the nature of religious experience, the problem of evil, and immortality. Pre-requisite: ENG 101. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, Other

PHI 200(3) **Course ID: 016766**
Professional Responsibility
Assesses the proper role of ethics within different professional settings, examining different professional codes of ethics and approaches to leadership and professionalism. Examines the nature of the professional-client relationship, recurring moral dilemmas, and the role of professionals in society. Develops a professional portfolio and practical professional skills. Lecture: 3.0 credits (45 contact hours)
Components: Lecture
Attributes: AH - Arts and Humanities, Other

PHI 250(3) **Course ID: 016844**
Symbolic Logic
Introduces students to the methods of formal deductive logic with emphasis upon applications to mathematics, computer science, and/or legal reasoning. Covers the language and rules of formal logic as well as techniques of formal proof. Pre-requisite: Math ACT score of 19 or above, 2. Successful completion of Intermediate Algebra, MAT 075, MAT126, or equivalent, or 3. KCTCS Placement exam recommendation. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

PHI 260(3) **Course ID: 000698**
History of Philosophy I: From Greek Beginnings to the Middle Ages
Provides an introductory study of the development of Western philosophy from ancient through late medieval times, including the development of fields such as logic, metaphysics, epistemology, and ethics. Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

PHI 270(3) **Course ID: 000497**
History of Philosophy II: From the Renaissance to the Present Era
Provides an introductory study of the development of Western philosophy from early modern through contemporary times, including the development of fields such as metaphysics, analytic and continental philosophy, and ethics. Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

PHI 299(3) **Course ID: 006969**
Special Topics in Philosophy: Topic
Examines special topics in philosophy. Includes, but not limited to, individual philosophers, movements, writings, traditions, and selected eras. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

PHI 1501(1) **Course ID: 016636**
Theories in Business Ethics
Presents ethical theories and techniques of moral reasoning used to analyze moral issues in business. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

PHI 1502(1) **Course ID: 016637**
Applying Business Ethics
Applies ethics and reasoning to current issues of management. Pre-requisite: PHI 1501. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

PHI 1503(1) **Course ID: 016638**
Defending Business Ethics
Evaluates current theories of corporate responsibility. Pre-requisite: PHI 1502. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

PHS UTC Physics

PHS 175(6) **Course ID: 001941**
Applied Physics
This course is a basic study of the principles of physics and mechanics, including motion, force, vectors, work, energy, machines, properties of matter, behavior of fluids, temperature and heat, properties of gases, wave motion, electricity, light, and nuclear physics. Problem solving techniques are stressed. Corequisite: MT 125. Lecture: 6 credits (150 contact hours).
Components: Lecture
Attributes: Other

PHX Physics

PHX 150(3) **Course ID: 001944**
Introductory Physics
A non-calculus approach to the concepts and applications of the physical principles of force, work, rate, resistance, energy, power, force transformers and gas laws is presented in this course. Students are shown by examples, classroom demonstration, and laboratory experiments how these concepts are applied to the translational and rotational mechanical, fluidal, electrical and thermal energy systems. Problem solving techniques and scientific method are stressed throughout this course. Prerequisite: MT 115 or MT 125. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PHY Physics

PHY 151(3) **Course ID: 000840**
Introductory Physics I
Focuses on the conceptual principles of mechanics of solids, liquids, gases, heat, and sound using some algebra. Credit is not given to students who already have credit for PHY 201 or PHY 231. Companion lecture to PHY 161 laboratory. Prerequisite: KCTCS placement in College Algebra or completion of Intermediate Algebra. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

PHY 152(3) **Course ID: 000402**
Introductory Physics II
Focuses on the conceptual principles of electricity, magnetism, optics, atomic, and nuclear physics using some algebra. Credit is not given to students who already have credit for PHY 203 or PHY 232. Companion lecture to PHY 162 laboratory. Prerequisite: KCTCS placement in College Algebra or completion of Intermediate Algebra. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

PHY 160(3) **Course ID: 000436**
Physics and Astronomy for Elementary Teachers
Addresses basic concepts of astronomy and physics appropriate for elementary teachers and is taught with an emphasis on inquiry-based, laboratory activities. Topics include the basics of the motion of objects, astronomy by sight, electrical circuits, magnetism and the behavior of light. Companion course to GLY 160. Pre-requisite: GLY 160. Lecture: 1 credit hour (15 contact hours). Lab: 2 credit hours (75 contact hours).
Components: Laboratory, Lecture
Attributes: SL - Science Laboratory, SN - Science

PHY 161(1) **Course ID: 000471**
Introductory Physics I Laboratory
Investigates concepts introduced in PHY 151 through experiments in classical mechanics and thermal physics. Prerequisite or concurrent: PHY 151. Lab: 1 credit hour (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory

PHY 162(1) **Course ID: 000475**
Introductory Physics II Laboratory
Investigates concepts introduced in PHY 152 through experiments in electricity, magnetism, light, atoms, and nuclei. Prerequisite or concurrent: PHY 152. laboratory: 1 credit (15 contact hours). Lab: 1 credit hour (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory

PHY 171(4) **Course ID: 000156**
Applied Physics
Surveys mechanics, heat, sound, electricity, magnetism, light, and modern physics as applied to practical systems. Prerequisite: (MAT 085 or (MAT 116 or greater) or Equivalent math placement score) or consent of instructor. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credits (30 contact hours).
Components: Laboratory, Lecture
Attributes: SL - Science Laboratory, SN - Science, Course Also Offered in Modules

PHY 171A (1) **Course ID: 015438**
Applied Physics: Mechanics
Surveys selected topics in motion, force, energy, and momentum. Pre-requisite: (MAT 085 or (MAT 116 or greater) or Equivalent math placement score) or consent of instructor. Lecture/Lab: 1.0 credit (19.5 contact hours).
Components: Lecture

PHY 171C(1) **Course ID: 015440**
Applied Physics: Electricity, Magnetism, and Sound
Surveys selected topics in waves, sound, electricity, and magnetism. Pre-requisite: (MAT 085 or (MAT 116 or greater) or Equivalent math placement score) or consent of instructor. Lecture/Lab: 1.0 credit (18.0 contact hours).
Components: Lecture

PHY 171D(1) **Course ID: 015441**
Applied Physics: Optics and Modern Physics
Surveys selected topics in light, optics, and modern physics. Pre-requisite: (MAT 085 or (MAT 116 or greater) or Equivalent math placement score) or consent of instructor. Lecture/Lab: 1.0 credits (18.0 contact hours).
Components: Lecture

PHY 172(2) **Course ID: 004817**
Physics for Health Sciences
Introduces the basic concepts of motion, forces, work, energy, power and waves through experimentation, as applied in electricity and magnetism, optics, atomic, and nuclear physics. Prerequisite: KCTCS placement in College Algebra or completion of Intermediate Algebra. Lab: 2 credit hours (60 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory

PHY 201(4) **Course ID: 000911**
College Physics I
Focuses on the mechanics of matter as governed by Newton's Laws; by the conservation laws of energy, momentum, and angular momentum; and thermal processes using algebra and basic trigonometry. Companion lecture to PHY 202 laboratory. Credit is not given to students who have already completed PHY 231. Prerequisite: (MT 150 or higher) or MA109 or an ACT math score of 25 or higher. Lecture: 3 credit hours (45 contact hours). Discussion: 1 credit hour (15 contact hours).
Components: Discussion, Lecture
Attributes: SN - Science

PHY 202(1) **Course ID: 000627**
College Physics I Laboratory
Enhances concepts introduced in PHY 201 through experiments in classical mechanics and thermal physics. Pre-requisite Or Co-requisite: PHY201 or equivalent. Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory

PHY 203(4) **Course ID: 000524**
College Physics II
Focuses on electromagnetic phenomena, circuits, optics and an introduction to modern physics using algebra and basic trigonometry. Companion lecture to PHY 204 laboratory. Credit is not given to students who have already completed PHY 232. Prerequisite: PHY 201 or equivalent. Lecture: 3 credit hours (45 contact hours). Discussion: 1 credit hour (15 contact hours).
Components: Discussion, Lecture
Attributes: SN - Science

PHY 204(1) **Course ID: 000192**
College Physics II Laboratory
Enhances concepts introduced in PHY 203 through experiments in electricity, magnetism, and optics. Pre-requisite Or Co-requisite: PHY203 or equivalent. Lab: 1.0 credit hour (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory

PHY 231(4) **Course ID: 000290**
General University Physics I
Focuses on the mechanics of matter as governed by Newton's Laws and by the conservation laws of energy, linear momentum, and angular momentum using calculus and trigonometry. Companion lecture to PHY 241 laboratory. Pre-requisite Or Co-requisite: MT185 or MA114 or equivalent. Lecture: 3 credit hours (45 contact hours). Discussion: 1 credit hour (15 contact hours).
Components: Discussion, Lecture
Attributes: SN - Science

PHY 232(4) **Course ID: 000625**
General University Physics II
Focuses on electromagnetic phenomena, circuits, and optics using vector calculus. Companion lecture to PHY 242 laboratory. Prerequisite: PHY 231. Pre-requisite Or Co-requisite: MT275 or MA213 or equivalent. Lecture: 3 credit hours (45 contact hours). Discussion: 1 credit hour (15 contact hours).
Components: Discussion, Lecture
Attributes: SN - Science

PHY 241(1) **Course ID: 000638**
General University Physics I Laboratory
Enhances concepts introduced in PHY 231 through a complement of experiments relating to motion, Newton's laws, rotation, and energy conservation principles. Prerequisite Or Co-requisite: PHY 231. Laboratory: 1 credit hour (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory

PHY 242(1) **Course ID: 000642**
General University Physics II Laboratory
Enhances concepts introduced in PHY 232 through a complement of experiments probing electromagnetic phenomena, circuits, and optics. Pre-requisite Or Co-requisite: PHY 232. Laboratory: 1 credit hour (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory

PHY 1711(0.5) **Course ID: 006109**
Motion & Newton's Laws
Surveys selected topics in velocity, acceleration, and force. Prerequisite: (MA 108 or (MT 115 or greater) or Equivalent math placement score) or consent of instructor. Lecture/Lab: 0.5 credit (9.37 contact hours).
Components: Lecture

PHY 1712(0.5) **Course ID: 006110**
Work, Energy, Power, and Momentum
Surveys selected topics in work, energy, power, and momentum. Prerequisite: (MA 108 or (MT 115 or greater) or Equivalent math placement score) or consent of instructor. Lecture/Lab: 0.5 credit (9.38 contact hours).
Components: Lecture

PHY 1713(0.5) **Course ID: 006111**
Fluid Dynamics
Surveys selected topics in fluid dynamics. Prerequisite: (MA 108 or (MT 115 or greater) or Equivalent math placement score) or consent of instructor. Lecture/Lab: 0.5 credit (9.37 contact hours).
Components: Lecture

PHY 1714(0.5) **Course ID: 006112**
Thermodynamics
Surveys selected topics in thermodynamics. Prerequisite: (MA 108 or (MT 115 or greater) or Equivalent math placement score) or consent of instructor. Lecture/Lab: 0.5 credit (9.38 contact hours).
Components: Lecture

PHY 1715(0.5) **Course ID: 006113**
Electricity and Magnetism
Surveys selected topics in electricity and magnetism. Prerequisite: (MA 108 or (MT 115 or greater) or Equivalent math placement score) or consent of instructor. Lecture/Lab: 0.5 credit (9.37 contact hours)
Components: Lecture

PHY 1716(0.5) **Course ID: 006114**
Wave Motion, Sound, and Light
Includes selected topics in wave mechanics, sound, and optics. Prerequisite: (MA 108 or (MT 115 or greater) or Equivalent math placement score) or consent of instructor. Lecture/Lab: 0.5 credit (9.38 contact).
Components: Lecture

PHY 1717(0.5) **Course ID: 006115**
Modern and Nuclear Physics
Surveys selected topics in atomic, nuclear, and modern physics. Prerequisite: (MA 108 or (MT 115 or greater) or Equivalent math placement score) or consent of instructor. Lecture/Lab: 0.5 credit (9.37 contact hours).
Components: Lecture

PHY 1718(0.5) **Course ID: 006116**
Integrated Physics Concepts
Surveys selected topics in applied physics. Prerequisite: PHY 1711 and PHY 1712 and PHY 1713 and PHY 1714 and PHY 1715 and PHY 1716, and PHY 1717 or Consent of instructor. Lecture/Lab: 0.5 credit (9.38 contact hours).
Components: Lecture

PHYS Physics

PHYS 105(3) **Course ID: 005599**
Concepts of the Physical World
A one-semester introduction to the concepts of physics for students planning to teach in elementary and middle schools. Topics include structure and properties of matter, mechanics, electricity, magnetism, heat, light and sound. Laboratory experiments are an integral part of this course. Pre-requisite: MT 120 or greater. Lecture: 3 credits (45 contact hours).
Components: Lecture

PL Plastics

PL 101(4) **Course ID: 001959**
Plastic Processes and Materials
This course provides the student with an introduction to plastics processes and terminology. Topics covered include polymer chemistry, polymer processing, thermoplastics, properties of plastics, plastics manufacturing processes, manufacturing equipment, tooling and molds, and heath, safety and business considerations in the commercial production of plastic products. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: Technical

PL 151(4) **Course ID: 001960**
Polymer Science & Testing
Provides an in-depth study of various plastics and important processing methods. Examines molecular structures and their effect on mechanical, chemical and physical properties. Includes commodity and engineering thermoplastics, thermosets and elastomers, extrusion, injection, blow molding and thermoforming. Prerequisite: PL 101. Lecture: 4 credits (60 contact hours).
Components: Lecture

PLB Plumbing

PLB 100(3) **Course ID: 004325**
Basic Theory of Plumbing
Provides a history of the plumbing trade and basic principles of the trade. Lecture: 2 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PLB 105(3) **Course ID: 004326**
Plumbing Principles
Provides the proper installation procedures for piping, water heaters and sewage systems. The plumbing codes appropriate for each installation will also be studied. Laboratory: 3 credits (135 contact hours).
Components: Laboratory

PLB 150(3) **Course ID: 001945**
Plumbing, Introduction to the Trade
Introduces the origin and basic principles of the plumbing industry. Includes the orientation of methods associated with the plumbing industry. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PLB 151(3) **Course ID: 001946**
Basic Plumbing Skills
This course introduces the student to basic pipe joining techniques. Corequisite: PLB 150. Laboratory: 3 credits (135 contact hours).
Components: Laboratory
Attributes: Technical

PLB 163(2) **Course ID: 001949**
Plumbing Fixtures
Develops the skills necessary to rough-in and install a kitchen group and laundry fixtures for residential and commercial applications. Prerequisite: PLB 150. Corequisite: PLB 250. Laboratory: 2 credits (90 contact hours).
Components: Laboratory

PLB 250(3) **Course ID: 001950**
Plumbing Appliances & Fixtures
Presents the installation practices of residential water heaters (electrical and gas); and the installation of commercial water heating systems with pumps, controls, and valve systems. Study will also include site layout and testing. Prerequisite: PLB 150. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PLB 251(2) **Course ID: 001951**
Pumps and Water Heaters
Develops skills in the installation of plumbing appliances (water heater), and appurtenances. Prerequisite: PLB 150. Corequisite: PLB 250. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

PLB 260(2) **Course ID: 001953**
Service
This course presents the study of methods, procedures, and skills involved in planning and estimating residential and commercial plumbing fixtures and systems. Prerequisite: PLB 150 or equivalent. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

PLB 261(2) **Course ID: 001954**
Advanced Plumbing Lab
This course will teach the student to plan and apply local code requirements for residential plumbing systems, and estimate supplies and cost of same. Prerequisite: PLB 150 or equivalent. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

PLB 262(3) **Course ID: 001955**
Backflow Prevention
This course teaches the student how to protect portable water systems from the hazards of backflow. Prerequisite: Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PLB 270(3) **Course ID: 001956**
License Preparation for Journeyman Exam
Provides a study of Kentucky Code in preparation for the Journeyman Exam. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

PLB 298(4) **Course ID: 004251**
Instructor Consent Required
Practicum/Repairs & Maintenance
Designed to provide the student with experience in the plumbing industry. This will be a non-paid evaluation of a student's developed skills. Prerequisite: Consent of instructor. Practicum: 4 credits (180 contact hours).
Components: Practicum
Attributes: Technical

PLB 299(4) **Course ID: 001958**
Instructor Consent Required
Cooperative Education
Provides students with experience in the plumbing industry. This will be a paid evaluation of a student's developed skills. Prerequisite: Consent of Instructor. Co-op: 4 credits (300 contact hours).
Components: Co-Op
Attributes: Technical

PLS Plant and Soil Science

PLS 190(3) **Course ID: 016575**
Introduction to Paralegal Studies
Introduces state and federal judicial systems and paralegal roles and careers. Emphasizes rules of professional conduct, legal ethics and unauthorized practice of law by non-lawyers. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: University Course (Western Kentucky University)

PLS 250(3) **Course ID: 016839**
Legal Research and Writing
The sources and techniques of performing legal research using primary and secondary authorities in a law library and online and drafting legal documents in appropriate format with correct citations. Pre-requisite: PLS 190 (A Western Kentucky University Course that Elizabethtown Community and Technical College currently offers). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: University Course (Western Kentucky University)

PLW Project Lead The Way

PLW 100(4) **Course ID: 006695**
Introduction to Engineering Design
Provides an introduction to the engineering profession, engineering disciplines, and technology. Emphasizes a "problem-solving" approach, engineering design process, and team projects. Lecture/Lab: 4 credits (150 contact hours).
Components: Lecture
Attributes: Technical

PLW 125(4) **Course ID: 006696**
Principles of Engineering
Students will be introduced to various types of engineering, engineering communications, various design processes, types of engineering systems, statics, materials, and strength of materials, engineering for reliability, and kinematics. Pre-requisite: PLW 100. Lecture/Lab: 4 credits (150 contact hours).
Components: Lecture
Attributes: Technical

PLW 130(4) **Course ID: 007197**
Principles of Biomedical Sciences
Engages students in the study of human medicine, research processes and an introduction to bioinformatics. Exposes students to investigations of human body systems and various health conditions including heart disease, diabetes, sickle-cell disease, hypercholesterolemia, and infectious diseases. Includes analysis of key biological concepts including: homeostasis, metabolism, inheritance of traits, feedback systems, the relationship of structure to function and defense against disease. Outlines all the courses in the Biomedical Sciences' program and to lay the scientific foundation necessary for student success in the subsequent courses. Pre-requisite: Reading, English, and Mathematics assessment exam scores above the KCTCS transitional placement level or successful completion of the prescribed transitional course(s). Lecture/Lab: 4.0 credits (150 contact hours).
Components: Lecture
Attributes: Technical

PLW 135(4) **Course ID: 007281**
Principles of Human Body Systems
Emphasizes the study of human body systems investigating identity, communication, power, movement, protection, and homeostasis. Uses experiments that investigate the structures and functions of the human body and uses data acquisition software to monitor body functions. Explores science in action as students build organs and tissues on a skeletal model, work through real-world cases, and role-play biomedical professionals to solve medical mysteries. Pre-requisite: PLW 130. Lecture/Lab: 4.0 credits (150 contact hours).
Components: Lecture
Attributes: Technical

PLW 140(4) **Course ID: 015805**
Medical Interventions
Focuses on exploring a variety of interventions involved in the prevention, diagnosis and treatment of disease. Uses a How-To manual to introduce prevention of and fighting of infection; how to screen and evaluate the code in human DNA; how to prevent, diagnose and treat cancer; and how to prevail when the organs of the body begin to fail. Examines lifestyle choices and preventive measures that influence health and highlights the important roles scientific thinking and engineering design play in the development of interventions of the future are examined. Pre-requisite: PLW 135. Lecture: 4.0 credits (150 contact hours).
Components: Lecture
Attributes: Technical

PLW 145(4) **Course ID: 016454**
Biomedical Innovation
Leads students to apply their knowledge and skills to answer questions or solve problems related to the biomedical sciences in a capstone course. Facilitates student design of innovative solutions for the health challenges of the 21st century in areas such as clinical medicine, physiology, biomedical engineering, and public health. Provides the opportunity to work on an independent project with a mentor, or advisor from a university, hospital, physician's office, or health industry provider. Students present their work to an adult audience including representatives from the local business and healthcare community. Pre-requisite: PLW 140. Lecture/Lab: 4 credits (150 contact hours).
Components: Lecture
Attributes: Technical

PLW 150(4) **Course ID: 006697**
Digital Electronics
This course uses computer simulations and hands on laboratory to teach students about the logic of electronics as they design, test, and construct electronic circuits and devices. Lecture: 1 credit (15 contact hours). Lab: 3 credits (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

PLW 200(4) **Course ID: 006698**
Aerospace Engineering
The major focus of the Aerospace EngineeringTM (AE) course is to expose students to the world of aeronautics, flight, and engineering. They will employ engineering and scientific concepts in the solution of aerospace problems. Pre-requisite: PLW-100, PLW-125, and PLW-150. Lecture/Lab: 4 credits (150 contact hours).
Components: Lecture

PLW 225(4) **Course ID: 006699**
Civil Engineering and Architecture
The major focus of the Civil Engineering and ArchitectureTM (CEA) course is a long-term project that involves the development of a local property site. As students learn about various aspects of civil engineering and architecture, they apply what they learn to the design and development of this property. Pre-requisite: PLW-100, PLW-125, and PLW-150. Lecture/Lab: 4 credits (150 contact hours).
Components: Lecture
Attributes: Technical

PLW 250(4) **Course ID: 006700**
Computer Integrated Manufacturing
The purpose of the Computer Integrated Manufacturing course is to expose students to the fundamentals of computerized manufacturing technology. The course includes: Computer Modeling; CNC Equipment; CAM Software; Robotics; and Flexible Manufacturing Systems. Pre-requisite: PLW-100, PLW-125, and PLW-150. Lecture/Lab: 4 credits (150 contact hours).
Components: Lecture

PLW 295(4) **Course ID: 006701**
Engineering Design and Development
Engineering student teams research, design, and construct a solution to open-ended engineering problem using product development lifecycle and the design process; presentation to defend solutions to a panel of outside reviewers. Pre-requisite: PLW 150 AND one of the following: PLW 200, OR PLW 225, OR PLW 250, OR Consent of the APC and/or Instructor. Lecture/Lab: 4 credits (150 contact hours).
Components: Lecture

PMX Power Mechanics/Measurement

PMX 100(3) **Course ID: 001962**
Precision Measurement
This class introduces the student to the basic fundamentals of precision measurement and its application in the industrial setting. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

POL Political Science

POL 101(3) **Course ID: 000912**
American Government
Examines national government and the political process in the United States, with emphasis on the Constitution, the President, Congress, and the judicial system. Focuses on the nature of American democracy, political challenges, and opportunities. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

POL 210(3) **Course ID: 000630**
Introduction to European Politics: East and West
Compares the political institutions, policy-making processes, citizen participation and political outcomes in Eastern and Western European states. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

POL 212(3) **Course ID: 002254**
Culture and Politics in Developing Nations
Examines and compares the politics of selected states in Africa, Asia, and Latin America analyzing such issues as culture, ethnicity, language, social class, and ideology. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

POL 235(3) **Course ID: 000438**
World Politics
Examines the most significant problems of world politics, including the fundamental factors governing international relations, the techniques and instruments of power politics, and the conflicting interest in organizing world peace. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

POL 255(3) **Course ID: 000066**
State Government
Examines the institutions, political processes, and policies of state governments, and the relationships of state governments with other levels of government in the United States. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

POL 271(3) **Course ID: 000724**
Introduction to Political Behavior
The study of behavior in a political context; the analysis of basic behavioral concepts used in political science such as political roles, group behavior, belief systems, personality, power, and decision-making. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, Other

POL 280(3) **Course ID: 005213**
Issues in Public Policy
Examines selected major public issues, focusing on their nature, political ramifications, and alternate methods of managing conflict. Includes discussion of varying policies such as poverty, health care, energy, education, race and ethnic relations, and the environment. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

POL 299(1 - 3) **Course ID: 004276**
Special Topics in Political Science
Addresses various topics, issues, and trends in political science. Includes topics that may vary from semester to semester at the discretion of the instructors. Lecture: 1.0 - 3.0 credits (15 contact hours).
Components: Lecture

PSC Professional Studio Artist

PSC 112(3) **Course ID: 006850**
Ceramics I
Introduces traditional clay forming skills, their development and use in the 21st century. Investigates hand building, wheelthrowing, and decorative techniques. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

PSC 115(3) **Course ID: 006851**
Ceramics II
Investigates and improves ceramic techniques in wheel throwing, basic glaze applications, surface decoration, and traditional firings. Develops and advances individual techniques and skills. Pre-requisite: PSC 112. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

PSC 117(3) **Course ID: 006852**
Glaze Calculations
Examine glaze calculation, technology and the raw ceramic materials used to create glazes for ceramics art and production. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

PSC 210(3) **Course ID: 006853**
Ceramics III
Investigates Ceramics construction techniques, glazing, surface decoration and firing. Continues to develop practice and execution of individual's aesthetic and functional creativities. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

PSC 211(3) **Course ID: 006854**
Kiln Operation and Design
Introduces various types of kilns and firing operations. Investigates Raku, pit and downdraft gas kiln designs. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

PSC 212(3) **Course ID: 006855**
Ceramic Production Techniques
Examine properties and characteristics of slip casting and mold-making techniques. Emphasize the science of both traditional and non-traditional ceramics materials and its practical application for the professional ceramics production. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

PSC 215(3) **Course ID: 006856**
Ceramics IV
Investigates production studio pottery and advanced contemporary ceramics through refinement of construction techniques, expanding glaze pallets, and advanced surface decorations and glaze firing. Pre-requisite: PSC 210. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

PSC 220(3) **Course ID: 006857**
Ceramics Product Development
Explores product development and the business concerns of professional ceramics production. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

PSC 230(3) **Course ID: 006858**
Ceramics V
Focuses on creating a body of work for exhibition and developing a professional portfolio. Pre-requisite: PSC 215. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

PSG Polysomnography

PSG 100(2) **Course ID: 005275**
Introduction to Polysomnography
Introduces the topics of behavioral and performance objectives, national patient safety goals, medical ethics, infection control, environmental and clinical emergencies, HIPPA, basic medical terminology and skills required for employment. Prerequisite:Minimum grade of a C in [(BIO 137 and (MAT 110 or MAT 146 or MAT 150)] or consent of the instructor. Lecture: 2.0 credit (30 contact hours).
Components: Lecture
Attributes: Technical

PSG 110(3) **Course ID: 005276**
Polysomnography Level I
Provides the knowledge necessary for entry-level personnel in the basics of polysomnographic technology. Includes instrumentation setup and calibration, recording and monitoring techniques, therapeutic interventions and patient-technologist interactions related to polysomnography. Lecture: 3 credits (45 contact hours). Prerequisite: (BIO 137 and (MT 110 or MT 145 or MT 150)) with a grade of "C" or better) or consent of the instructor.
Components: Lecture
Attributes: Technical

PSG 111(1) **Course ID: 005277**
Polysomnography Lab I
Provides practical experience on the equipment used during a standard sleep study. The set-up, calibration, attachment, artifact recognition and troubleshooting of electroencephalographic (EEG), electro-oculographic (EOG), electromyographic (EMG), pulse oximetry (SpO2), body position, airflow, chest and abdominal movement detection equipment as well as the application of positive airway pressure and oxygen used in therapeutic interventions will be included. Laboratory exercises to develop effective patient-technologist interactions will also be included. Laboratory: 1 credit (60 contact hours). Prerequisite: (BIO 137 and (MT 110 or MT 145 or MT 150) with a grade of "C" or better) or consent of the instructor.
Components: Laboratory
Attributes: Technical

PSG 115(3) **Course ID: 005278**
Polysomnography Practice I
Provides clinical experience and training in the basic skills required of an entry-level polysomnographic technologist. Includes instrumentation set-up and calibration, recording and monitoring techniques, documentation, professional issues and patient-technologist interactions related to polysomnographic technology. Clinical: 3 credits (180 contact hours). Prerequisite: ((BIO 137 and (MT 110 or MT 145 or MT 150) with a grade of "C" or better) or consent of the instructor. Also Healthcare Provider BLS certification.
Components: Clinical
Attributes: Technical

PSG 130(3) **Course ID: 005279**
Polysomnography Level II
Addresses all of the aspects of sleep scoring and event recognition, instrumentation setup and calibration, recording and monitoring techniques, documentation, professional issues, therapeutic interventions, and patient-technologist interactions related to polysomnography. Prerequisite: PSG 110 with a grade of a C or better, or consent of the instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PSG 131(1) **Course ID: 005280**
Polysomnography Lab II
Provides laboratory training in advanced aspects of polysomnographic technology. Students will become familiar with the skills and apply the knowledge needed to evaluate sleep recordings. It covers sleep stage scoring, event recognition, report generation, and higher level therapeutic interventions. Includes procedure and scoring for specialized testing such as the multiple sleep latency test (MSLT) and maintenance of wakefulness test (MWT). Laboratory: 1 credit (60 contact hours). Prerequisite: PSG 111 with a grade of "C" or better, or consent of the instructor.
Components: Laboratory
Attributes: Technical

PSG 133(3) **Course ID: 007064**
Pathologies of Sleep and Related Disorders
Develops knowledge of pathophysiology of sleep disorders as well as the effect of co-morbidities on sleep. Presents content on pathologies and related applications for various age groups to include pharmacology, medical emergency recognition and treatment. Pre-requisite: PSG 110 with a grade of "C" or better or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PSG 135(3) **Course ID: 005281**
Polysomnography Practice II
Provides students with experience in advanced aspects of polysomnographic technology. It covers all the aspects of sleep scoring and event recognition, instrumentation set-up and calibration, recording and monitoring techniques, documentation, professional issues, therapeutic interventions, and patient-technologist interactions related to polysomnographic technology. Clinical: 3 credits (180 contact hours). Prerequisite: PSG 115 with a grade of "C" or better, or consent of the instructor. Also Healthcare Provider BLS certification.
Components: Clinical
Attributes: Technical

PSJ Professional Artist/Jewelry

PSJ 110(3) **Course ID: 005067**
Jewelry/Metals I
Introduces the tools, techniques, and materials of the professional jeweler/metalsmith with an emphasis on the design and production of jewelry projects in precious metals, the basic development of jewelry bench skills, and the discussion of business practices. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

PSJ 115(3) **Course ID: 005068**
Jewelry/Metals II
Continues PSJ 110 and a further introduction to the tools, techniques, and materials of the professional jeweler/metalsmith. Emphasizes working more 3-dimensionally and with greater complexity through the design and completion of jewelry projects. Prerequisite: PSJ 110 or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

PSJ 116(3) **Course ID: 005069**
Ancient Techniques
Introduces the history, methods and techniques of metalsmithing from antiquity through the 14th century. Emphasizes metalsmithing traditions and classic techniques through the design and completion of jewelry projects and assignments incorporating ancient methods. Prerequisite: PSJ 110 or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

PSJ 117(2) **Course ID: 005070**
Metal Casting/Finishing Techniques
Provides the intermediate level jewelry/metalsmithing student with experiences in the design, modeling, and studio production of three-dimensional objects by the direct mold and waste mold methods of casting precious metal. Prerequisite: PSJ 110 or Consent of Instructor. Lab: 2.0 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

PSJ 210(3) **Course ID: 005071**
Jewelry/Metals III
Provides an in-depth investigation into tools, techniques, and materials of the professional jeweler/metalsmith including the application of coloring through enameling and alternative means. Prerequisite: (PSJ 115 and PSJ 117) or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

PSJ 211(3) **Course ID: 005072**
Hollowware and Metal Forming
Covers design and technical processes creating functional hollowware. Emphasizes dimensional forming of sheet metal through raising, sinking, plannishing and anticlastic forming. Prerequisite: PSJ 115 or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

PSJ 212(2) **Course ID: 005073**
Metallurgy of Precious Metals
Covers properties and characteristics of precious metals and their alloys. Emphasizes the science of metallurgy and its practical application for the professional jeweler/metalsmith. Prerequisite: (PSJ 115 and PSJ 116) or Consent of Instructor. Lab: 2.0 credits (60 contact hours).
Components: Laboratory

PSJ 215(3) **Course ID: 005074**
Jewelry/Metals IV
Includes an in-depth investigation on production methods and techniques of the professional jeweler/metalsmith. Prerequisite: (PSJ 210 and PSJ 212) or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

PSJ 216(3) **Course ID: 005075**
Stone Setting
Covers advanced stone setting methods and techniques for the professional jeweler/metalsmith. Prerequisite: (PSJ 210 and PSJ 212) or Consent of Instructor. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory

PSJ 220(2) **Course ID: 005076**
Jewelry/Metals Product Development
Explores product development and the business concerns of the professional jeweler/metalsmith. Prerequisite: (PSJ 210 and PSJ 212) or Consent of Instructor. Pre-requisite Or Co-requisite: PSJ 215. Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory

PSJ 230(6) **Course ID: 005077**
Jewelry/Metals V
Provides a capstone course that focuses on creating a body of work for exhibition and developing a professional portfolio. Prerequisite:(PSJ 210 and PSJ 212 and PSJ 220) or Consent of Instructor. Lab: 6.0 credits (180 contact hours).
Components: Laboratory

PSM Profession Studio Artist Music

PSM 101(3) **Course ID: 005552**
Bluegrass & Traditional Music History I: Geographic Influence & Instrumental Origin
Provides an overview of traditional instruments and their geographic and cultural origins as they relate to the foundation of bluegrass and traditional music genres. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PSM 105(1) **Course ID: 005553**
Recording I
Introduces recording and sound reproduction history, terminology, equipment, and practical session experience. Lab: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: Technical

PSM 107(1) **Course ID: 007257**
Songwriting I
Introduces the process of creating original melodies and lyrics under the direction of a professional songwriter. Lab: 1.0 credit (30 contact hours).
Components: Laboratory

PSM 108(1) **Course ID: 005529**
Songwriting I
Introduces the process of creating original melodies and lyrics under the direction of a professional songwriter. Lab: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: Technical

PSM 110(1) **Course ID: 005554**
Individual Stringed Instrument Instruction
Provides an individual stringed instrument study course under the guidance of an experienced professional instructor. Designed to teach performance techniques in a flexible structure. May be repeated with different subtitle for a maximum of 4 credits. Prerequisite: Audition. Lab: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: Technical

PSM 111(1) **Course ID: 005556**
Guitar I
Teaches basic fundamentals of bluegrass and traditional chords, rhythm and simple flat-picking lead along with standard tuning and set-up tips. Prerequisite: MUS 174 or Consent of Instructor. Lab: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: Technical

PSM 112(1) **Course ID: 007258**
Individual Stringed Instrument Instruction
Provides an individual stringed instrument study course under the guidance of an experienced professional instructor. Designed to teach performance techniques in a flexible structure. May be repeated with different subtitle for a maximum of 4 credits. Pre-requisite: Audition. Lab: 1.0 credit (30 contact hours).
Components: Laboratory

PSM 113(1) **Course ID: 007259**
Guitar I
Teaches basic fundamentals of bluegrass and traditional chords, rhythm and simple flat-picking lead along with standard tuning and set-up tips. Pre-requisite: MUS 174 or Consent of Instructor. Lab: 1.0 credit (30 contact hours).
Components: Laboratory

PSM 114(2) **Course ID: 007260**
Bluegrass & Traditional Band/Ensemble
Pairs two or more instrumentalists in a group/ensemble setting, in order to explore the components and structure of a band under the guidance of a professional band leader. May be repeated with different subtitle for a maximum of 8 credits. Lab: 2.0 credits (60 contact hours).
Components: Laboratory

PSM 115(2) **Course ID: 005555**
Bluegrass & Traditional Band/Ensemble
Pairs two or more instrumentalists in a group/ensemble setting, in order to explore the components and structure of a 'band' under the guidance of a professional band leader. May be repeated with different subtitle for a maximum of 8 credits. Lab: 2.0 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

PSM 116(2) **Course ID: 005528**
Bluegrass & Traditional Harmony/Part Singing
Introduces basic bluegrass and traditional harmony/part singing and theory using ear training, number notation and basic chords. Prerequisite: MUS 174 or Consent of Instructor. Lab: 2.0 credits (60 contact hours).
Components: Laboratory

PSM 117(1) **Course ID: 007261**
Songwriting II
Provides guidance through the process of creating and refining original melodies and lyrics under the direction of a professional songwriter, emphasizing different techniques while overcoming barriers. Pre-requisite: PSM 107 or Consent of Instructor. Lab: 1.0 credit (30 contact hours).
Components: Laboratory

PSM 118(2) **Course ID: 007262**
Bluegrass & Traditional Harmony/Part Singing
Introduces basic bluegrass and traditional harmony/part singing and theory using ear training, number notation and basic chords. Pre-requisite: MUS 174 or Consent of Instructor. Lab: 2.0 credits (60 contact hours).
Components: Laboratory

PSM 121(3) **Course ID: 005557**
Bluegrass & Traditional Music History II: Evolution of Old Time, Folk and Early Bluegrass
Provides an in-depth study of old time, folk and early bluegrass music genres and their components, exploring connections between radio, labor conflict, war and early professional musicians. Prerequisite: PSM 101 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

PSM 125(1) **Course ID: 005558**
Recording II
Provides practical studio and set-up training for recording sessions utilizing software and computers. Prerequisite: PSM 105 or Consent of Instructor. Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory

PSM 128(1) **Course ID: 005559**
Songwriting II
Provides guidance through the process of creating and refining original melodies and lyrics under the direction of a professional songwriter, emphasizing different techniques while overcoming barriers. Prerequisite: PSM 108 or Consent of Instructor. Lab: 1.0 credit (30 contact hours).
Components: Laboratory

PSM 217(2) **Course ID: 007263**
Songwriting III
Provides guidance through the process of creating and refining original melodies, lyrics and music under the direction of a professional songwriter, emphasizing writing for specific media and multi-writer collaboration. Pre-requisite: PSM 117 or Consent of Instructor. Lab: 2.0 credits (60 contact hours).
Components: Laboratory

PSM 227(2) **Course ID: 007264**
Songwriting IV
Provides guidance through the process of creating an effective demo and marketing original songs under the direction of a professional songwriter, emphasizing the completed demo project. Pre-requisite: PSM 217or Consent of Instructor. Lab: 2.0 credits (60 contact hours).
Components: Laboratory

PSM 231(3) **Course ID: 005560**
Bluegrass & Traditional Music History III: Early Stringband & Country Music
Provides an in-depth study of early stringband, country music and promotion pioneers, focusing on the role of early radio and barndances. Prerequisite: PSM 121 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PSM 235(2) **Course ID: 005561**
Recording III
Provides an in-depth study of computer and Pro Tools software, recording techniques and applications. Prerequisite: PSM 125 or Consent of Instructor. Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

PSM 238(2) **Course ID: 005562**
Songwriting III
Provides guidance through the process of creating and refining original melodies, lyrics and music under the direction of a professional songwriter, emphasizing writing for specific media and multi-writer collaboration. Prerequisite: PSM 128 or Consent of Instructor. Lab: 2.0 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

PSM 241(3) **Course ID: 005563**
Bluegrass & Traditional Music History IV: The Masters & Their Music
Provides a comprehensive study of the music and careers of the iconic figures in bluegrass & traditional music from 1936 to present. Requires listening to recordings, reading the primary text, and reading suggested articles from industry periodicals. Prerequisite: PSM 231. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

PSM 245(2) **Course ID: 005564**
Recording IV
Provides an advanced and complex study of recording, mixing and editing software session data to finished products. Prerequisite: PSM 235 or Consent of Instructor. Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory

PSM 248(2) **Course ID: 005565**
Songwriting IV
Provides guidance through the process of creating an effective demo and marketing original songs under the direction of a professional songwriter, emphasizing the completed demo project. Prerequisite: PSM 238 or Consent of Instructor. Lab: 2.0 credits (60 contact hours).
Components: Laboratory

PSM 250(3) **Course ID: 005566**
Instructor Consent Required
Field Experience/Production/Business
Designed to give a wide variety of practical, hands-on work experience in the bluegrass and traditional music field. (Companion course to PSA 240). Prerequisite: Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

PSW Professional Artist/Woodwork

PSW 111(3) **Course ID: 005056**
Introduction to Furniture Making
Introduces tools, techniques, and materials of the professional wood worker, focusing on actual studio production and design processes in wood and furniture. Lab: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

PSW 115(3) **Course ID: 005057**
Furniture Making II
Focuses on the application of complex joinery, design features, and finishing techniques to a given furniture project. Explores historical perspectives and business related topics. Prerequisite: PSW 111 or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

PSW 116(2) **Course ID: 005058**
Wood Finishing
Introduces wood finishing and fine furniture making. Prerequisite: PSW 111 and PSW 115) or Consent of Instructor. Lab: 2.0 credits (60 contact hours).
Components: Laboratory

PSW 117(3) **Course ID: 005059**
Wood Turning for Furniture
Covers basic and advanced turning skills including splindle turning and faceplate work and tool sharpening and usage. Prerequisite: PSW 111 or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

PSW 210(3) **Course ID: 005060**
Furniture Making III
Focuses on complicated joinery techniques, machine tool operations, advanced finishing applications, and small business considerations. Prerequisite: PSW 115 and PSW 116) or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

PSW 211(3) **Course ID: 005061**
Wood Bending and Veneering
Covers construction and design possibilities through techniques of strip lamination and steam bending to create curved shaped parts in furniture. Includes veneering design and applications. Prerequisite: (PSW 115 and PSW 116) or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

PSW 212(3) **Course ID: 005063**
Chair Design
Focuses on design and construction for good seating requirements based on sound design and structural integrity. Prerequisite: PSW 117 or Consent of Instructor. Pre-requisite Or Co-requisite: PSW 211. Lab: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

PSW 215(3) **Course ID: 005062**
Furniture Making IV
Emphasizes special processes of design, production, and cost efficiencies associated with operating a custom furniture studio including marketing and overall business knowledge. Prerequisite: (PSW 210 and PSW 212) or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

PSW 220(2) **Course ID: 005064**
Furniture/Wood Product Development
Includes applications associated with design and construction possibilities with fabricated products. Focuses on C. N. C. machining and CAD design as well as 32-MM and KD (knock down) systems including architectural work and cabinetry design. Prerequisite: (PSW 210 and PSW 211) or Consent of Instructor. Lab: 2.0 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

PSW 230(6) **Course ID: 005065**
Furniture Making V
Focuses on creating a body of work for exhibition and developing a professional portfolio. Prerequisite: (PSW 212 and PSW 215 and PSW 220) or Consent of Instructor. Lab: 6.0 credits (180 contact hours).
Components: Laboratory
Attributes: Technical

PSY Psychology

PSY 110(3) **Course ID: 000563**
General Psychology
Introduces the history, methods and content of modern psychology. Covers the history and systems of psychology, psychological research, physiological psychology, psychological processes, developmental psychology, personality, abnormal behavior and social psychology. Prerequisite: ACT, COMPASS, or ASSET scores for college level reading OR completion of Transitional reading course(s).
Components: Lecture
Attributes: SB - Social Behavior Science, Course Also Offered in Modules

PSY 180(3) **Course ID: 000151**
Human Relations
Explores the sociological and psychological forces that affect interpersonal relationships as individuals work and live together. Prerequisite: ACT, COMPASS, or ASSET scores for college level reading OR completion of Transitional reading course(s).
Components: Lecture
Attributes: SB - Social Behavior Science

PSY 181(1) **Course ID: 000312**
Leadership Development
Prepares student leaders to lead small peer groups. Emphasizes study skills, oral/written communication skills, various tutoring techniques, and leadership skills. Prerequisite: ACT, COMPASS, or ASSET scores for college reading and writing or completion of Transitional reading and writing course(s); GEN 100 and/or consent of instructor. Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: Other

PSY 185(3) **Course ID: 000602**
Human Potential
Introduces the principles of relating to self and others and focuses upon self-growth. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

PSY 188(1) **Course ID: 000604**
Directed Undergraduate Reading in Psychology
Explores in-depth a specific topic related to the student's personal or career interests in psychology under the direction of a faculty member. Reading proposal must be approved by instructor. Prerequisite: PSY 110 and consent of instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Other

PSY 189(1 - 2) **Course ID: 000606**
Directed Undergraduate Research in Psychology
Requires students to design and conduct an elementary research project relevant to the student's personal or career interests in psychology under the direction of a faculty member. Requires development of a psychology literature review. Research proposal must be approved by instructor. Pre-requisite: PSY 213 and consent of instructor (If PSY 215 is changed to PSY 213 Research Methods) Laboratory: 1.0 - 2.0 credits (30-60 contact hours).
Components: Laboratory
Attributes: Other

PSY 195(1) **Course ID: 005749**
Orientation to Psychology
Orients students who plan to major in psychology at a four-year institution to the educational issues and potential career and employment options. Discusses career paths and employment opportunities, professional resources and issues, and educational planning. Prerequisite: Declared major in Psychology, or consent of instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Other

PSY 212(4) **Course ID: 002256**
Applications of Statistics in Psychology
Introduces students to descriptive and inferential statistics in design, analysis, and interpretation of psychological research. Prerequisite: ACT, COMPASS, or ASSET score for college level mathematics or completion of Transitional math course(s); PSY 110. Lecture/Lab: 4.0 credits (75 contact hours).
Components: Lecture
Attributes: Other

PSY 213(4) **Course ID: 002255**
Research Methods
Applies scientific methods to psychological research. Provides practical experience in designing and executing a research project using observational, survey, and/or true experimental design methodologies. Requires application of descriptive and inferential statistics and written report of research project results. Prerequisite: PSY 110. Lecture/Lab: 4.0 credits (75 contact hours).
Components: Lecture
Attributes: Other

PSY 223(3) **Course ID: 000488**
Developmental Psychology
Examines physical, cognitive, emotional, and social development throughout the lifespan from conception to death. Reviews concepts, principles, and theories of developmental psychology. Explores influences upon psychological development such as heredity, culture, ethnicity, socioeconomic status, and gender. Pre-requisite: PSY 100 or PSY 110. Lecture: 3.0 credits (45 contact hours). .
Components: Lecture
Attributes: SB - Social Behavior Science, Course Also Offered in Modules

PSY 230(3) **Course ID: 000387**
Psychosocial Aspects of Death and Dying
Examines the biophysiological, psychological, sociological, and cultural aspects of death and dying in the evolving global world. Explores variations in the behaviors and attitudes associated with death, dying, and bereavement, with particular attention to the contexts (e.g., cultural, familial, historical, life span developmental) in which these variations occur. Prerequisite: PSY 110 or SOC 101, or consent of instructor. Lecture: 3.0 credits (45 contact hours)
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

PSY 297(3) **Course ID: 004818**
Psychology of Aging
Provides an overview of the demographics of aging, theories of aging and research methods used to study adult development. Examines the biological, psychological and social impact of aging, longevity work, retirement, death and bereavement. Prerequisite: PSY 110 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

PSY 298(3) **Course ID: 004819**
Essentials of Abnormal Psychology
Provides an overview of the theories, diagnoses, and treatments of psychological disorders. Covers the biological, psychological, and social factors that influence the etiology, understanding, and management of psychopathology within society. Prerequisite: PSY 110 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

PSY 299(1 - 3) **Course ID: 000534**
Special Introductory Topics in Psychology
Introduces specialized topics in the field of psychology to meet current trends and investigations of contemporary issues in the discipline. May be repeated to a maximum of six credits under different subtitles. Prerequisite: PSY 110 or consent of instructor. Lecture: 1.0 - 3.0 credits (15 - 45 contact hours).
Components: Lecture
Attributes: Other

PSY 1101(0.6) **Course ID: 006215**
Foundations of Psychology
Introduces the history, methods, and content of modern psychology to include the systems of psychology, psychological research, and physiological psychology. Prerequisite: ACT, COMPASS, or ASSET scores for college level reading OR completion of Transitional reading course(s). Lecture: 0.6 credits (9.0 contact hours).
Components: Lecture

PSY 1102(0.6) **Course ID: 006216**
Senses, Perception and Emotion
Addresses the history, methods, and content of modern psychology to include physiological psychology and psychological processes. Prerequisite: PSY 1101. Lecture: 0.6 credit (9.0 contact hours).
Components: Lecture

PSY 1103(0.6) **Course ID: 006217**
Learning, Memory, Intelligence
Addresses the history, methods, and content of modern psychology to include psychological processes. Prerequisite: PSY1102. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

PSY 1104(0.6) **Course ID: 006218**
Personality & Social Aspects
Addresses the history, methods, and content of modern psychology to include developmental psychology. Prerequisite: PSY 1103. Lecture: 0.6 credit (9.0 contact hours).
Components: Lecture

PSY 1105(0.6) **Course ID: 006219**
Psychological Disorders
Addresses the history, methods, and content of modern psychology to include abnormal psychology and psychological processes. Prerequisite: PSY 1104. Lecture: 0.6 credits (9.0 contact hours).
Components: Lecture

PSY 2231(0.6) **Course ID: 006379**
Foundations of Development
Introduces the principles of developmental psychology with emphasis on theory and data relating to the physical, cognitive, and psycho-social developmental aspects. Explores prenatal development through the birth process. Prerequisite: PSY 110. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

PSY 2232(0.6) **Course ID: 006380**
Infancy through Early Childhood
Emphasizes theory and data relating to the physical, cognitive, and psycho-social developmental aspects of infancy, toddlerhood, and early childhood. Prerequisite: PSY 2231. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

PSY 2233(0.6) **Course ID: 006381**
Middle Childhood & Adolescence
Emphasizes theory and data relating to the physical, cognitive, and psycho-social developmental aspects of middle childhood and adolescence. Prerequisite: PSY 2232. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

PSY 2234(0.6) **Course ID: 006382**
Emerging and Middle Adulthood
Emphasizes theory and data relating to the physical, cognitive, and psycho-social developmental aspects of emerging and middle adulthood. Prerequisite: PSY 2233. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

PSY 2235(0.6) **Course ID: 006383**
Late Adulthood; Death & Dying
Emphasizes theory and data relating to the physical, cognitive, and psycho-social developmental aspects of late adulthood. Explores issues related to death and bereavement. Prerequisite: PSY 2234. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

PTA Physical Therapist Assistant

PTA 101(5) **Course ID: 016102**
Orientation to Physical Therapy Practice
Includes orientation to the profession of physical therapy, legal aspects of physical therapy practice, interdisciplinary team, cultural diversity, medical terminology, research and evidence-based practice, and introductory patient-care skills such as communication, aseptic techniques, body mechanics, safety procedures, wheelchair management, patient transfers, patient positioning and draping, and vital signs, identification and fitting of ambulation aids, basic gait training, patient and consumer education. Pre-requisite: Admission to the PTA Program and completion of BIO 137 with a grade of "C" or better. Co-requisite: PTA 125. Lecture: 2.0 credits (30 contact hours). Lab: 3.0 credits (90 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

PTA 120(2) **Course ID: 006723**
Basic Skills for the PTA
Introduces basic concepts of health and disease and introductory patient care skills. Includes orientation to the profession of physical therapy, legal aspects of physical therapy practice, and introductory patient-care skills such as aseptic technique; body mechanics; safety procedures; wheelchair management; patient transfers; positioning and draping; gait training; passive, active, and active-assisted exercise and stretching. Pre-requisite: Admission to the PTA Program; Completion of BIO 137 & BIO 139 with a C or better. Co-requisite: PTA 1501, PTA 1502, PTA 121, PTA 170. Lecture: 2 credits (30 contact hours).
Components: Lecture

PTA 121(2) **Course ID: 006724**
Basic Skills for the PTA Lab
Develops introductory patient-care skills such as communication; safety procedures; aseptic technique; body mechanics; wheelchair management; patient transfers; positioning and draping; gait training; pain assessment; passive, active, and active-assisted exercise; stretching; and documentation. Lab experiences will reflect concepts taught in the paired lecture course. Pre-requisite: Admission to the PTA Program; Completion of BIO 137 & BIO 139 with a C or better. Co-requisite: PTA 1501 and PTA 1502 and PTA 120 and PTA 170. Lab: 2 credits (60 contact hours).
Components: Laboratory

PTA 125(1) **Course ID: 007370**
Neuroanatomy for the PTA
Encompasses the neuroanatomy of the central and peripheral nervous systems and applies these concepts to common neurological pathologies found in rehabilitation. Pre-requisite: Admission to the PTA Program and completion of BIO 137 with a grade of "C" or better. Co-requisite: PTA 101. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

PTA 150(6) **Course ID: 004174**
Functional Anatomy and Kinesiology
Emphasizes the structure and function of the musculoskeletal system, the relationship with biomechanical principles, basic physical principles, and the mechanical aspects of human motion. Includes muscle testing, flexibility testing, goniometry, and aspects of normal gait and posture. Pre-requisite: [Pathway 1: Admission to the PTA Program and completion of BIO 137, BIO 139, PTA 101 & PTA 125 with a grade of "C" or better.] OR [Pathway 2: Admission to the PTA Program and completion of BIO 137 & BIO 139 with a grade of "C" or better]. Co-requisite: [Pathway 1: PTA 160 and PTA 170] OR [Pathway 2: PTA 120, PTA 121 and PTA 170]. Lecture: 3.0 credits (45 contact hours). Lab: 3.0 credits (90 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

PTA 160(3) Course ID: 004173
Medical and Surgical Conditions in Physical Therapy
Includes the study of health and disease of all age groups with an emphasis on the etiology, pathology, prevention, data collection, and physical therapy interventions in selected medical and surgical conditions encountered in physical therapy. Pre-requisite: Admission to the PTA Program and completion of BIO 137, BIO 139, PTA 101 and PTA 125 with a C or better. Co-requisite: PTA 150 and PTA 170. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PTA 170(1) Course ID: 004013
Clinical Practicum I
Includes clinical observation and practice of selected physical therapy interventions and data collection with the application of knowledge from previous/concurrent PTA courses and general education coursework. Pre-requisite: [Pathway 1: Admission to the PTA Program and completion of BIO 137, BIO 139, PTA 101 & PTA 125 with a C or better.] OR [Pathway 2: Admission to the PTA Program and completion of BIO 137 & BIO 139 with a C or better.] Co-requisite: [Pathway 1: PTA 150 and PTA 160] OR [Pathway 2: PTA 120, PTA 121, PTA 1501, and PTA 1502,]. Practicum: 1 credit (60 contact hours).
Components: Practicum
Attributes: Technical

PTA 200(5) Course ID: 004017
Modalities & Procedures in Physical Therapy
Includes the basic physical science principles of selected physical therapy interventions, data collection, and selected physiotherapy interventions including wound therapy, compression therapy, safety procedures, gait training, traction, massage, superficial heat and cold, deep heat modalities, electrotherapy, ultraviolet radiation, hydrotherapy, and documentation. Pre-requisite: Admission to the PTA Program and completion of: PTA 150 and 160 with a grade of "C" or better; PTA 170 with a grade of P; all general education courses required for completion of the Physical Therapist Assistant program with a grade of "C" or better. Co-requisite: PTA 220, PTA 240. Lecture: 2 credits (30 contact hours). Laboratory: 3 credits (90 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

PTA 202(2) Course ID: 006725
Therapeutic Modalities in Physical Therapy
Includes the basic physical science, data collection, and principles of selected physical therapy interventions including, massage, superficial heat and cold, sound agents, electromagnetic radiation, electrotherapy, biofeedback, traction, and compression therapy. Pre-requisite: Admission to the PTA Program; Completion of PTA 1501, PTA 1502, PTA 120, PTA 121, PTA 170 with a C or better. Co-requisite: PTA 222, PTA 223, PTA 232, PTA 233, PTA 203, PTA 240. Student cannot progress to PTA 240 without a grade of "C" or better in all other co-requisite courses. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

PTA 203(2) Course ID: 006726
Therapeutic Modalities in Physical Therapy Lab
Develops skills in data collection, documentation, and the application of selected physical therapy interventions including, massage, superficial heat and cold, sound agents, electrotherapy, biofeedback, traction, and compression therapy. Lab experiences will reflect concepts taught in the paired lecture course. Pre-requisite: Admission to the PTA Program; Completion of PTA 1501, PTA 1502, PTA 120, PTA 121, PTA 170 with a C or better. Co-requisite: PTA 222, PTA 223, PTA 232, PTA 233, PTA 202, PTA 240. Student cannot progress to PTA 240 without a grade of "C" or better in all other co-requisite courses. Lab: 2.0 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

PTA 220(5) Course ID: 004016
Physical Therapy Principles & Procedures
Emphasizes selected physical therapy interventions and data collection for management of patients with the following problems: musculoskeletal conditions, pulmonary diseases, pathological gait, balance problems, thermal injuries, arthritis, amputations and cardiac diseases. Includes therapeutic exercise, orthotics, prosthetics, wellness, and women's health issues. Prerequisite: Admission to the PTA Program and completion of: PTA 150 and 160 with a grade of "C" or better; PTA 170 with a grade of P; all general education courses required for completion of the Physical Therapist Assistant program with a grade of "C" or better. Corequisite: PTA 200, PTA 240. Lecture: 2 credits (30 contact hours). Laboratory: 3 credits (90 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

PTA 222(2) Course ID: 006727
Pathology & Rehabilitation of Orthopedic Conditions
Emphasizes the etiology, pathology, prevention, data collection, and selected physical therapy interventions for management of patients with the following problems: musculoskeletal conditions, pathological gait, arthritis, and amputations. Includes the study of wellness and women' issues, therapeutic exercise, orthotics, and prosthetics. Pre-requisite: Admission to the PTA Program; Completion of PTA 1501, PTA 1502, PTA 120, and PTA 121 with a C or better. Completion of PTA 170 with a grade of P. Co-requisite: PTA 223, PTA 232, PTA 233, PTA 202, and PTA 203, and PTA 240. Students cannot progress to PTA 240 without a grade of "C" or better in all other co-requisite courses. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

PTA 223(2) Course ID: 006728
Pathology & Rehabilitation of Orthopedic Conditions Lab
Develops skills in selected physical therapy interventions and data collection for management of patients with the following problems: musculoskeletal conditions, pathological gait, arthritis, and amputations. Includes therapeutic exercise, orthotics, prosthetics, and supportive devices. Pre-requisite: Completion of PTA 1501, PTA 1502, PTA 120, and PTA 121 with a C or better. Completion of PTA 170 with a grade of P. Co-requisite: PTA 222, PTA 232, PTA 233, PTA 202, PTA 203 and PTA 240. Students cannot progress to PTA 240 without a grade of "C" or better in all other co-requisite courses. Lab: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

PTA 232(3) Course ID: 006729
Pathology & Rehabilitation of Neurological & Pediatric Conditions
Focuses on etiology, pathology, progression, prevention, data collection, and selected physical therapy interventions for management of patients of all age groups with disabilities resulting from the following: brain injury, spinal cord injury, and genetic/congenital disorders. Includes balance disorders, normal growth and development, and the rationale and techniques of neuromuscular re-education. Pre-requisite: Admission to the PTA Program; Completion of PTA 1501, PTA 1502, PTA 120, and PTA 121 with a C or better. Completion of PTA 170 with a grade of P. Co-requisite: PTA 222, PTA 223, PTA 233, PTA 202, and PTA 203 and PTA 240. Students cannot progress to PTA 240 without a grade of "C" or better in all other co-requisite courses. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PTA 233(2) Course ID: 006730
Pathology & Rehabilitation of Neurological & Pediatric Conditions Lab
Develops skills in the application of selected physical therapy interventions for patients of all age groups with disabilities resulting from the following: brain injury, spinal cord injury, genetic/congenital, and balance disorders. Includes techniques of neuromuscular re-education. Pre-requisite: Admission to the PTA Program; Completion of PTA 1501, PTA 1502, PTA 120, and PTA 121 with a C or better. Completion of PTA 170 with a grade of P. Co-requisite: PTA 222, PTA 223, PTA 232, PTA 202, and PTA 203, and PTA 240. Students cannot progress to PTA 240 without a grade of "C" or better in all other co-requisite courses. Lab: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

PTA 234(2) Course ID: 016878
Pathology & Rehabilitation of Neurological & Pediatric Conditions
Focuses on etiology, pathology, progression, prevention, data collection, and selected physical therapy interventions for management of patients of all age groups with disabilities resulting from the following: brain injury, spinal cord injury, and genetic/congenital disorders. Includes balance disorders, normal growth and development, and the rationale and techniques of neuromuscular re-education. Pre-requisite: Admission to the PTA Program; Completion of PTA 1501, PTA 1502, PTA 120, and PTA 121 with a "C" or better. Completion of PTA 170 with a grade of "P". Co-requisite: PTA 222, PTA 223, PTA 233, PTA 202, and PTA 203 and PTA 240. Students cannot progress to PTA 240 without a grade of "C" or better in all other co-requisite courses. Lecture: 2.0 credits (30 contact hours).
Components: Lecture

PTA 240(2) Course ID: 004018
Clinical Practicum II
Includes clinical observation and practice of selected physical therapy interventions and data collection with the application of knowledge from previous/concurrent PTA courses and general education coursework. This course will entail four consecutive weeks of full-time clinical experience. In order to participate in this clinical experience, the student must be earning a grade of "C" or better in all corequisite courses. Pre-requisite: [Pathway 1: Admission to the PTA Program and completion of: PTA 150 and 160 with a C or better; PTA 170 with a grade of P; all general education courses required for completion of the Physical Therapist Assistant program with a grade of "C" or better.] OR [Pathway 2: Admission to the PTA Program and completion of: PTA 120, PTA 121, PTA 1501, and PTA 1502 with a grade of "C" or better; PTA 170 with a grade of P.] Co-requisite: [Pathway 2: PTA 202, PTA 203, PTA 222, PTA 223, PTA 232, and PTA 233, Students cannot progress to PTA 240 without a grade of "C" or better in all Co-requisite courses.] Pre-requisite Or
Components: Practicum
Attributes: Technical

PTA 250(5) Course ID: 004019
Neurological Rehabilitation in Physical Therapy
Focuses on rehabilitation procedures, including assistive devices, for patients of all age groups with disabilities resulting from brain injury, spinal cord injury, and genetic/congenital disorders. Includes normal growth and development and the rationale and techniques of neuromuscular re-education. Pre-requisite: Admission to the PTA Program and completion of: PTA 200 and 220 with a grade of "C" or better and PTA 240 with a grade of P. Co-requisite: PTA 260. Pre-requisite Or Co-requisite: PTA 280; if taken as a prerequisite to PTA 280, must earn a grade of "C" or better for PTA 250. Lecture: 3 credits (45 contact hours). Laboratory: 2 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

PTA 254(1) Course ID: 006731
Pathology & Rehabilitation of Special Populations & Conditions
Emphasizes the etiology, pathology, prevention, data collection, and selected physical therapy interventions for management of patients with the following conditions: respiratory system, cardiovascular system, metabolic, and rheumatologic pathologies; psychiatric disorders; infectious diseases; oncology; thermal injuries; integumentary disorders; and wounds. Includes therapeutic exercise and wound care. Pre-requisite: PTA 222, PTA 223, PTA 232, PTA 233, PTA 202, PTA 203 with a C or better. Completion of PTA 240 with a grade of P. Co-requisite: PTA 255, PTA 260, and PTA 280. Students cannot progress to PTA 280 without a grade of "C" or better in all other co-requisite courses. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical

PTA 255(1) Course ID: 006732
Pathology & Rehabilitation of Special Populations & Conditions Lab
Develops skills in the application of selected physical therapy interventions for patients with the following problems: respiratory system, cardiovascular system, metabolic, and rheumatologic pathologies; psychiatric disorders; infectious diseases; oncology; thermal injuries; integumentary disorders; and wounds. Includes therapeutic exercise and wound care. Pre-requisite: PTA 222, PTA 223, PTA 232, PTA 233, PTA 202, and PTA 203 with a C or better. Completion of PTA 240 with a grade of P. Co-requisite: PTA 254, PTA 260, and PTA 280. Students cannot progress to PTA 280 without a grade of "C" or better in all other co-requisite courses. Lab: 1 credit (30 contact hours).
Components: Laboratory
Attributes: Technical

PTA 256(2) Course ID: 016884
Pathology & Rehabilitation of Special Populations and Conditions
Emphasizes the etiology, pathology, prevention, data collection, and selected physical therapy interventions for management of patients with the following conditions: respiratory system, cardiovascular system, metabolic, and rheumatologic pathologies; psychiatric disorders; infectious diseases; oncology; thermal injuries; integumentary disorders; and wounds. Includes therapeutic exercise and wound care. Lecture: 2.0 credits (30 contact hours)
Components: Lecture

PTA 260(2) Course ID: 004172
Seminar in Physical Therapy
Presents topics to assist the student in the transition to physical therapist assistant including trends, specialized practice, patient services, and the employment process. Utilizes case studies to assist students to integrate theory and practice. Pre-requisite: [Pathway 1: Admission to the PTA Program and completion of: PTA 200 and 220 with a grade of "C" or better and PTA 240 with a grade of P.] OR [Pathway 2: PTA 202, PTA 203, PTA 222, PTA 223, PTA 232, and PTA 233 with a grade of "C" or better. Completion of PTA 240 with a grade of P.] Co-requisite: [Pathway 1: PTA 250], [Pathway 2: PTA 254, PTA 255, and PTA 280. Students cannot progress to PTA 280 without a grade of "C" or better in all co-requisite courses.] Pre-requisite Or Co-requisite: [Pathway 1: PTA 280; if taken as a prerequisite to PTA 280, must earn a C or better for PTA 260.] Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

PTA 280(5) Course ID: 004020
Clinical Practicum III
Includes clinical observation and practice of physical therapy interventions and data collection with the application of knowledge from previous and concurrent PTA courses and general education coursework. By the end of the clinical experience the student will demonstrate an entry level of practice. Pre-requisite: [Pathway 1: Admission to the PTA Program and completion of: PTA 200 and 220 with a grade of "C" or better and PTA 240 with a grade of P.] OR [Pathway 2: PTA 202, PTA 203 PTA 222, PTA 223, PTA 232, and PTA 233 with a grade of "C" or better. Completion of PTA 240 with a grade of P.] Co-requisite: [Pathway 2: PTA 254, PTA 255, and PTA 260. Students cannot progress to PTA 280 without a grade of "C" or better in all co-requisite courses.]Pre-requisite Or Co-requisite: [Pathway 1: PTA 250, PTA 260; if taken as prerequisites to PTA 280, must earn a C or better for PTA 250 & PTA 260.] Practicum: 5 credits (400 contact hours).
Components: Practicum
Attributes: Technical

PTA 1501(3) Course ID: 006721
Functional Anatomy and Kinesiology Lab
Develops selected data collection techniques in physical therapy, including: goniometry, manual muscle testing, flexibility, sensory integrity, reflex testing, and postural assessment. Lab experiences will reflect concepts taught in paired lecture course. Pre-requisite: [Pathway 1: Admission to the PTA Program and completion of BIO 137, BIO 139, PTA 101 and PTA 125 with a grade of "C" or better] OR [Pathway 2: Admission to the PTA Program; Completion of BIO 137 & BIO 139 with a C or better.] Co-requisite: [Pathway 1: PTA 160, PTA 170 & PTA 1502] OR [Pathway 2: PTA 120, PTA 121, PTA 1502 and PTA 170]. Lab: 3 credits (90 contact hours).
Components: Laboratory

PTA 1502(3) Course ID: 006722
Functional Anatomy and Kinesiology Lecture
Provides knowledge related to the structure and function of the musculoskeletal system, the relationship with biomechanical principles, basic physical principles, and the mechanical aspects of human motion. Includes principles of muscle testing, flexibility testing, goniometry, and aspects of normal gait and posture. Pre-requisite: [Pathway 1: Admission to the PTA Program and completion of BIO 137, BIO 139, PTA 101 & PTA 125 with a grade of "C" or better.] OR [Pathway 2: Admission to the PTA Program and completion of BIO 137 & BIO 139 with a C or better.] Co-requisite: [Pathway 1: PTA 160, PTA 170 & PTA 1501] OR [Pathway 2: PTA 120, PTA 121, PTA 1501 and PTA 170.] Lecture: 3 credits (45 contact hours).
Components: Lecture

QMS Quality Management Systems

QMS 101(3) Course ID: 004464
Introduction to Quality Systems
Students are introduced to fundamental concepts, principles, and practices used to improve quality in organizations. The need for organizational change is reviewed and paradigms of quality are introduced. An overview of areas of change, methods of quality planning, and methods for implementing quality policies are provided. Students will practice problem solving techniques, make decisions based on data, work in teams, troubleshoot, and demonstrate knowledge of implementing continuous improvement processes. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

QMS 201(3) Course ID: 004465
Customer Service Improvement Skills
Students will develop cognitive processes and behavioral skills needed to improve personal and work group effectiveness. Techniques are discussed and demonstrated in assessing internal and external customer needs and develop plans for delivery of quality customer service. Topics include customer's point of view, benchmarking quality customer service processes, developing partnerships with customers, measuring customer satisfaction, self-evaluation, personal mission statements, time management, communication and listening techniques, coaching, mentoring, group problem solving, and decision making techniques. Lecture: 3 credits (45 contact hours). Prerequisite: QMS 101 or Consent of Instructor.
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

QMS 202(3) Course ID: 000869
Performance Management
Students are introduced to a systematic, data-oriented approach to managing people for maximizing performance and quality. Data are used to measure and evaluate effectiveness of performance. Organizational and individual behavior will be studied in the context of increasing performance and quality. Lecture: 3 credits (45 contact hours). *M*
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

QMS 210(3) Course ID: 004283
Lean Processes
Introduces the concepts and skills of lean processing for manufacturing and service settings. Covers organizational readiness, 5S, value stream mapping, kaizen, and visual workplace. Examines the implementation of processing. Prerequisite: QMS 101 or Consent of Instructor and MA 109 or MT 150. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

QMS 212(3) Course ID: 004284
Project Management
Provides insight into concepts and skills required to design the infrastructure for the successful planning, scheduling, and launching of a project. Promotes skills necessary to improve coordination of organizational resources, create effective teams, operate efficiently in a rapidly changing world, and minimize internal problems of system start ups. Teaches techniques to gain organizational acceptance for projects. Prerequisite: QMS 101 or consent of instructor. Lecture: 3 Credits (45 contact hours).
Components: Lecture
Attributes: Technical

QMS 220(3) Course ID: 004466
Quality Audits
Involves an in-depth examination of the function of planning, organizing, and conducting quality audits. Emphasizes planning, implementing, and reporting results of quality audits and taking corrective action. Prerequisite: QMS 101 or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

QMS 240(3) Course ID: 004467
Statistics for Quality I
Introduces methods of organizing information about processes. Examines presentation, description, and analysis of data. Emphasizes handling and interpreting numerical information, including histograms and control charts. Presents and applies concepts of probability to control charts to promote process understanding to improve quality of products and service. Investigates sampling principles. Uses computer generated analyses. Prerequisite: MA 109 or MT 150. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

QMS 242(3) Course ID: 004468
Statistics for Quality II
Builds upon the foundation of QMS 240 techniques of inferential statistics. Confidence interval estimation, hypothesis testing, regression analysis, ANOVA, and non-parametric tests are developed. Gauging Studies and SPC techniques for short production runs are included. Lecture: 3 credits (45 contact hours). Prerequisite: QMS 240.
Components: Lecture
Attributes: Technical

QMS 251(3) Course ID: 000668
Strategic Quality Planning
Introduces strategic concepts of planning as a proactive catalyst for organizational and quality improvement. Examines the process of envisioning, environmental scanning, mission formulation, and benchmarking. Promotes action planning and leadership for its implementation. Prerequisite: QMS 101 or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

QMS 262(4) Course ID: 000694
Design of Experiments
Basic statistical methods are reviewed. Statistical techniques which parallel methods of SPC are introduced. Analysis of means, analysis of variance, and contrast comparisons are studied to facilitate the understanding of the different experimental design methods. Examples from manufacturing illustrate how to reduce product variability and optimum process factor settings. Computer software is utilized throughout the course. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (30 contact hours). Prerequisite: QMS 242 or Consent of Instructor.
Components: Laboratory, Lecture

QMS 299(1 - 6) Course ID: 000537
Instructor Consent Required
Selected Topics in Quality Management Systems: (Topic)
Quality issues selected are considered in this course. Topics vary from semester to semester. This course may be repeated with different topics for a maximum of 6 credit hours. Lecture: 1-3 credits (15-90 contract hours). Prerequisite: Consent of Instructor.
Components: Lecture

QMS 1011(0.6) **Course ID: 005165**
Understanding a Quality Focused Organization
Past quality initiatives and progressive quality trends. Lecture: 0.6 credits (9 contact hours)
Components: Lecture

QMS 1012(0.6) **Course ID: 005166**
Quality Tools of the Trade
Quality improvement tools and techniques and their integration into an organization. Prerequisite: QMS 1011 or consent of instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

QMS 1013(0.6) **Course ID: 005167**
Systems for Quality Improvement
Integrated quality systems and operations that produce high levels of employee and intra-organizational commitment. Prerequisite: QMS 1012 or consent of instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

QMS 1014(0.6) **Course ID: 005168**
Quality Planning for Continuous Improvement
Organizational-wide planning techniques and processes focused on long-term quality improvement. Prerequisite: QMS 1013 or consent of instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

QMS 1015(0.6) **Course ID: 005169**
People Power: The Key to Quality Improvement
Maximizing the capabilities of people by creating a fun and positive work environment. Prerequisite: QMS 1014 or consent of instructor. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

QMS 2011(1) **Course ID: 006199**
Personal Effectiveness for Quality Customer Service
Provides for the development of cognitive processes and behavioral skills needed to improve personal and work group effectiveness. Includes self-evaluation, personal mission statements, time management, communication and listening techniques, coaching, mentoring, group problem solving, and decision making techniques. Prerequisite: QMS 101 or consent of instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

QMS 2012(1) **Course ID: 006200**
Understanding the Customer
Includes techniques for assessing internal and external customer needs and developing plans for delivery of quality customer service. Includes customer's point of view, benchmarking quality customer service processes, and developing partnerships with customers. Prerequisite: QMS 2011 or consent of instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

QMS 2013(1) **Course ID: 006201**
Analyzing the Health of the Customer Service Relationship
Includes how to measure customer satisfaction, using decision making techniques. Prerequisite: QMS 2012 or consent of instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

QMS 2021(0.6) **Course ID: 005170**
Introduction to Performance Management
Emphasis on performance management and the ABC model of behavior change. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

QMS 2022(0.6) **Course ID: 005171**
ABC Analysis and Delivering Reinforcers
Principles of ABC analysis with emphasis on reinforcers and techniques in delivering reinforcers. Prerequisite: QMS 2021 or consent or instructor. Lecture: 0.6 credits (9 Contact hours).
Components: Lecture

QMS 2023(0.6) **Course ID: 005172**
Reinforcement Schedules and Unwanted Behavior
A variety of reinforcement schedules will be introduced and a number of procedures will be analyzed in dealing with unwanted behavior. Prerequisite: QMS 2022 or consent of instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

QMS 2024(0.6) **Course ID: 005173**
Pinpoints and Measurement
Fundamentals of pinpointing, identifying a job's mission, and understanding effective measurement. Prerequisite: QMS 2023 or consent of instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

QMS 2025(0.6) **Course ID: 005174**
Feedback, Goals, and Applying Performance Management
The value and variety of feedback and its relationship to goal setting as the foundation of performance management. Prerequisite: QMS 2024 or consent of instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

RAE Russian and Eastern Studies

RAE 120(3) **Course ID: 005363**
Introduction to Chinese Culture
Examines economic, political, cultural, and social realities that offer more opportunities and engagement at every level for non-native Chinese people. Includes some basic vocabulary. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

RAE 140(4) **Course ID: 004228**
Elementary Modern Standard Arabic
Introduces students to the standard written language of the Arab World. Provides initial emphasis upon the phonology and script, followed by gradual coverage of the grammar, with exercises in reading, writing, pronunciation, and vocabulary building. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Other

RAE 150(4) **Course ID: 004857**
Elementary Chinese I
Introduces basic modes of communication in Chinese. Stresses speaking, listening, reading and writing as target skills. Emphasizes everyday language which the students will learn by applying essential grammatical structures to vocabulary. Presents an overview of the cultures of China. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Foreign Language, Cultural Studies

RAE 151(4) **Course ID: 004858**
Elementary Chinese II
Continues the study of basic Chinese through grammar, reading, and oral practice. Stresses speaking and listening as the target skills; reading and writing remain centered on intense and repetitive practice with the pinyin character system. Emphasizes everyday language. Presents an overview of the cultures of China. Prerequisite: RAE 150 or consent of instructor Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: Foreign Language, Cultural Studies

RCP Respiratory Care Practitioner

RCP 110(3) **Course ID: 003786**
Cardiopulmonary Anatomy and Physiology
Provides an in-depth analysis of the respiratory and circulatory systems with emphasis on the interaction of systems in gas exchange and acid-base balance as well as the structure and function of the chest cage, mechanics of breathing and control of respiration. Lecture: 3 credits (45 contact hours). Prerequisite: BIO 137 with a grade of "C" or better. Corequisite: BIO 137.
Components: Lecture
Attributes: Technical

RCP 120(4) **Course ID: 003787**
Theory and Principles of Respiratory Care
Presents the principles and techniques of therapeutic procedures used in respiratory care, including an emphasis on medical asepsis, safe handling and administration of medical gases, uses of humidity, aerosol therapy, lung inflation techniques, bronchial hygiene therapy and airway care. Prerequisite or corequisite: (BIO 137 and (MAT 110 or MAT146 or MAT150 or equivalent) with a grade of "C" or better if taken as pre-requisite). Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (60 contract hours).
Components: Laboratory, Lecture
Attributes: Technical

RCP 121(1) **Course ID: 004832**
Respiratory Care Practice I
Emphasizes the health care team and the practice and or performance of techniques of basic respiratory care including airway management and bronchial hygiene. Prerequisite or corequisite: RCP 122 with a grade of "C" or better; Valid Health Care Provider CPR card . Clinical: 1 credit (60 contact hours).
Components: Clinical
Attributes: Technical

RCP 122(4) **Course ID: 004831**
Fundamentals of Respiratory Care
Introduces respiratory care including chest physical assessment, medical gas therapy, humidity and aerosol therapy, bronchial hygiene, airway management, medical asepsis and development of the respiratory care plan. Prerequisite: : [(MAT 110 or MAT 146 or MAT 150) BIO 137 and BIO 139) with a grade of "C" or better] or consent of instructor. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

RCP 125(4) **Course ID: 003788**
Cardiopulmonary Evaluation
Examines cardiopulmonary assessment with in-depth coverage of invasive and non-invasive arterial blood gas interpretation, electrocardiography and assessment of chest and neck imaging. Prerequisite: (RCP 110 and BIO 137 and (MT 110 or MT 145 or MT 150 or equivalent) with a grade of "C" or better). Prerequisite or Corequisite: RCP 110. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

RCP 130(3) **Course ID: 003789**
Pharmacology
Provides an in-depth study of pharmacological agents, their use in the practice of respiratory care for patients with cardiovascular or pulmonary impairment as well as accuracy in drug calculations and delivery. Lecture: 3 credits (45 contact hours). Prerequisite: (RCP 110 and (MT 110 or MT 145 or MT 150) with a grade of "C" or better). Corequisite: RCP 110 and (MT 110 or MT 145 or MT 150).
Components: Lecture
Attributes: Technical

RCP 140(2) **Course ID: 004835**
Cardiopulmonary Assessment
Emphasizes blood gas analysis, pulmonary function studies, electrocardiography and chest radiography. Prerequisite: [(RCP 110 and RCP 122 and RCP 130) with a grade of "C" or better] or consent of instructor. Lecture: 1.5 credits (22.50 contact hours). Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

RCP 150(2) **Course ID: 003790**
Clinical Practice I
Provides an opportunity for observation and/or performance of techniques for chest physical assessment, medical gas administration, humidity and aerosol therapy and bronchial hygiene in the assigned clinical setting. Prerequisite or corequisite: RCP 120 with a grade of "C" or better; Valid Health Care Provider CPR card. Clinical: 2 credits (120 contact hours).
Components: Clinical
Attributes: Technical

RCP 175(3) **Course ID: 003791**
Clinical Practice II
Provides an opportunity to participate in the health care team while practicing techniques of respiratory care including airway management and bronchial hygiene in the assigned setting. Prerequisite: RCP 150 with a grade of "C" or better; Clinical: 3 credits (180 contact hours).
Components: Clinical
Attributes: Technical

RCP 176(2) **Course ID: 004834**
Respiratory Care Practice II
Emphasizes participation in the health care team while practicing techniques of basic respiratory care including airway management and bronchial hygiene Prerequisite: [(RCP 110 and RCP 122 and RCP 130) with a grade of "C" or better] or consent of instructor. Prerequisite or corequisite: RCP140 (If taken as a pre-requisite, a grade of "C" or better is required.) Clinical: 2 credits (120 contact hours).
Components: Clinical
Attributes: Technical

RCP 180(3) **Course ID: 003792**
Ventilatory Support
Covers the technological and physiological aspects of mechanical ventilation including the theory of operation, classification, and management of the patient ventilator system. Prerequisite: RCP 120 and RCP 150 with a grade of "C" or better. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

RCP 185(2) **Course ID: 004837**
Introduction to Mechanical Ventilation
Introduces the technological aspects of mechanical ventilation including the theory of operation, classification and patient-ventilator system checks. Prerequisite: [(RCP 140 and RCP 176) with a grade of "C" or better] or consent of instructor. Lecture: 1.5 credits (22.5 contact hours). Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

RCP 190(2) **Course ID: 003793**
Advanced Ventilatory Support
Addresses advanced concepts in ventilatory support, including physiologic effects, indications, monitoring and management of the patient-ventilator system. Prerequisite: RCP 180 with a C or better. Lecture: 1.5 credits (22.5 contact hours); Laboratory: 0.5 credits (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

RCP 195(4) **Course ID: 004838**
Patient-Ventilator System Management
Addresses advanced concepts in ventilatory support including monitoring and management of the patient-ventilator system. Prerequisite: [(RCP 185 and RCP 201) with a grade of "C" or better] or consent of instructor. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

RCP 200(3) **Course ID: 003794**
Clinical Practice III
Provides practice in adult mechanical ventilation procedures and airway management in the critical care setting and performance of other respiratory care skills. Prerequisite: RCP 175 with a grade of "C" or better. Clinical: 3 credits (180 contact hours).
Components: Clinical
Attributes: Technical

RCP 201(2) **Course ID: 004836**
Respiratory Care Practice III
Provides practice in adult mechanical ventilation procedures and airway management in the critical care setting in addition to continued performance of the basic respiratory care skills. Prerequisite: [(RCP 140 and RCP 176) with a grade of "C" or better] or Consent of Instructor. Clinical: 2 credits (120 contact hours).
Components: Clinical
Attributes: Technical

RCP 204(3) **Course ID: 003795**
Emergency & Special Procedures
Prepares students to participate in advanced emergency life support and special procedures. Prerequisite or Corequisite: [(RCP 130 and BIO 139) with a grade of "C" or better]. Lecture: 2.5 credits (37.5 contact hours). Laboratory: 0.5 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

RCP 210(3) **Course ID: 003796**
Cardiopulmonary Pathophysiology
Addresses the etiology, diagnosis, clinical manifestations and management of cardiopulmonary disorders as related to respiratory care including the fundamental microbiological principles and their relation to health and disease. Prerequisite: [RCP 110 or (RCP 201 and RCP 185) with a grade of "C" or better] or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

RCP 212(3) **Course ID: 003797**
Neonatal/Pediatric Respiratory Care
Provides a study of the special needs of the neonatal and pediatric patient with focus on fetal cardiopulmonary development, evaluation, assessment and treatment of cardiopulmonary conditions and diseases of the neonatal and pediatric patient, as well as equipment unique to this population. Prerequisite: (RCP 185 and RCP 201) with a grade of "C" or better] or Consent of Instructor. Prerequisite or Corequisite: RCP 190 with a grade of "C" or better or Consent of Instructor. Lecture: 2.5 credits (37.5 contact hours). Laboratory: 0.5 credits (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

RCP 214(3) **Course ID: 003798**
Advanced Diagnostic Procedures
Prepares students to assist physician in advanced diagnostic, and therapeutic procedures. Prerequisite: BIO 139 with a grade of "C" or better. Lecture: 2.5 credits (37.50 contact hours). Laboratory: 0.5 credits (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

RCP 225(3) **Course ID: 003799**
Clinical Practice IV
Provides observation and practice of advanced cardiopulmonary evaluation techniques while improving efficiency in the ventilatory management of patients. Prerequisite: RCP 200 with a grade of "C" or better. Clinical: 3 credits (180 contact hours).
Components: Clinical
Attributes: Technical

RCP 226(4) **Course ID: 004841**
Respiratory Care Practice IV
Provides observation and practice in advanced cardiopulmonary evaluation techniques while improving efficiency in the ventilatory management of adult patients. Prerequisite: [(RCP 176 and RCP 185) with a grade of "C" or better] or Consent of Instructor. Clinical: 4 credits (240 contact hours).
Components: Clinical
Attributes: Technical

RCP 228(2) **Course ID: 003800**
Preventive and Long-Term Respiratory Care
Covers prevention of cardiopulmonary disorders and care of individuals with long term cardiopulmonary disability. Addresses psychosocial and physical needs of clients with emphasis on improving the quality of life and cardiopulmonary reserve. Prerequisite: [RCP 110 or (RCP 195 and RCP 210 and RCP 212 and RCP 226) with a grade of "C" or better] or consent of instructor. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

RCP 240(3) **Course ID: 004844**
Advanced Cardiopulmonary Evaluation
Addresses cardiopulmonary assessment including hemodynamic monitoring, pulmonary and cardiac exercise/stress testing, advanced cardiac procedures, blood chemistry and fluid and electrolyte balance. Prerequisite: [RCP 195 and RCP 210 and RCP 212,and RCP 226) with a grade of "C" or better] or consent of instructor. Lecture: 2.75 credits (41.25 contact hours). Laboratory: .25 credit (15 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

RCP 245(2) **Course ID: 004845**
Advanced Cardiac Life Support
Focuses on managing acute cardiovascular emergencies including cardiac arrest, acute myocardial infarction and stroke. Students demonstrating essential knowledge and skills and obtaining 85% or greater on the written exam will receive an American Heart Association ACLS provider card. Lecture: 1.5 credits (22.50 contact hours). Laboratory: 0.5 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

RCP 250(3) **Course ID: 003801**
Clinical Practice V
Prepares students to participate in effective and efficient planning, managing and delivering respiratory care to diverse client populations in various settings. Prerequisite: RCP 225 with a grade of "C" or better. Clinical: 3 credits (180 contact hours).
Components: Clinical
Attributes: Technical

RCP 251(4) **Course ID: 004843**
Respiratory Care Practice V
Prepares students to plan, manage, and deliver respiratory care to diverse client populations in various settings. Enables students to practice mechanical ventilation techniques and observe/practice techniques of advanced life support. Prerequisite: [(RCP 195 and RCP 210 and RCP 212 and RCP 226) with a grade of "C" or better] or Consent of Instructor. Clinical: 4 credits (240 contact hours).
Components: Clinical
Attributes: Technical

RCP 260(1) **Course ID: 004846**
Respiratory Care Seminar
Analyzes material previously studied in the program and prepares students for the National Board for Respiratory Care examination. Addresses job seeking skills. Prerequisite: [(RCP 200 and RCP210 and RCP 212 and RCP 225) with a grade of "C" or better] or Consent of Instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical

RDG Reading

RDG 20(3) **Course ID: 002286**
Improved College Reading
Improves proficiency in reading comprehension, vocabulary, and critical thinking skills, and prepares students for college and career reading through individualized and/or group instruction practice. Prerequisite: As determined by KCTCS Placement Policy. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Remedial - Reading, Course Also Offered in Modules

RDG 30(3) **Course ID: 002287**
Reading for the College Classroom
Improves critical reading skills by developing vocabulary techniques, active reading strategies, comprehension accuracy, and interpretation of visual elements in text. Applies theories and strategies taught in the course to college and career reading materials. Prerequisite: As determined by KCTCS Placement Policy, or successful completion of RDG 020. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Remedial - Reading, Course Also Offered in Modules

RDG 41(1) **Course ID: 006805**
Reading Laboratory
Designed to improve reading comprehension, vocabulary, and critical thinking skills. Strategies taught in this course will be applied to college level materials. Pre-requisite: Compass score 81-83. Lab: 1.0 credit (15 contact hours).
Components: Laboratory
Attributes: Remedial - Reading

RDG 96(4) **Course ID: 016767**
Introduction to College Reading
Improves proficiency in reading comprehension, critical thinking skills, and critical reading skills by developing vocabulary techniques, active reading strategies, comprehension accuracy, and interpretation of visual elements in text. Prepares students for college and career reading through individualized and/or group instruction and practice. Applies theories and strategies taught in the course to college and career reading materials. Pre-requisite: Current KCTCS placement policy. Lecture: 4.0 credits (60 contact hours)
Components: Lecture
Attributes: Remedial - Reading

RDG 100(2) **Course ID: 015658**
Reading Workshop
Improves reading comprehension and vocabulary of expository materials by improving student's comprehension processes and reading-related study skills. Applies strategies and skills taught in the course are applied to college level materials. Pre-requisite: KCTCS Placement Policy; COMPASS score 70-84 or equivalent. Co-requisite: Paired with a content-rich course as determined by Division Chair, Program Coordinator, or Faculty. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Other

RDG 185(3) **Course ID: 000301**
College Reading
Designed to improve critical reading, thinking, and writing at the college level by identifying the components of expository, persuasive, argumentative, and research text, including the author's use of tone, purpose, biased language and writing patterns. Apply strategies to college level text. Prerequisite: KCTCS Placement Policy. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules

RDG 0201(0.5) **Course ID: 006737**
Active Reading
Applies active reading, metacognitive, self-evaluation, and reading rate strategies for proficiency in reading comprehension. Includes topics such as the reading process, self-monitoring and self-correcting comprehension, and adjusting reading strategies for various comprehension purposes. Pre-requisite: As determined by KCTCS Placement Policy. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture
Attributes: Remedial - Reading

RDG 0202(0.75) **Course ID: 006738**
Transitions, Thought Patterns
Construct meaning from texts through analyzing transitions and patterns of organization to improve comprehension and critical thinking skills. Pre-requisite: As determined by KCTCS Placement Policy. Lecture: .75 credits (11.25 contact hours).
Components: Lecture
Attributes: Remedial - Reading

RDG 0203(1) **Course ID: 006739**
Basics of Argument
Recognize basic argument components, analyze contradictions to prior learning, and draw valid conclusions about claims and supports for claims to improve critical reading and thinking skills. Use main ideas to accurately summarize texts. Pre-requisite: As determined by KCTCS Placement Policy. Lecture: 1.0 credits (15 contact hours).
Components: Lecture
Attributes: Remedial - Reading

RDG 0204(0.75) **Course ID: 006740**
Words and Visual Elements
Expands vocabulary through examining word parts and context clues, and infers tone and purpose through word combinations. Constructs meaning from visual elements to improve comprehension of text. Pre-requisite: As determined by KCTCS Placement Policy. Lecture: .75 credits (11.25 contact hours).
Components: Lecture
Attributes: Remedial - Reading

RDG 0301(0.75) **Course ID: 006741**
Critical Reading
Uses active learning, prior knowledge, and metacognitive strategies to quickly enhance comprehension. Uses active learning, prior knowledge, and self-assessment strategies to quickly enhance comprehension of text. Pre-requisite: As determined by KCTCS Placement Policy, or successful completion of RDG 020. Lecture: .75 credits (11.25 contact hours).
Components: Lecture
Attributes: Remedial - Reading

RDG 0302(0.75) **Course ID: 006742**
Text Structures and Supports
Analyzes text structures, paragraphs, longer passages, and arguments for central ideas, supporting examples, reasons, and evidence to construct meaning from texts. Pre-requisite: As determined by KCTCS Placement Policy, or completion of RDG 020. Lecture: .75 credits (11.25 contact hours).
Components: Lecture
Attributes: Remedial - Reading

RDG 0303(0.75) **Course ID: 006743**
Logic and Evidence
Analyzes text for logical reasoning and valid supports to quickly detect key information in texts. Pre-requisite: As determined by KCTCS Placement Policy, or completion of RDG 020. Lecture: .75 credits (11.25 contact hours).
Components: Lecture
Attributes: Remedial - Reading

RDG 0304(0.75) **Course ID: 006744**
Words and Visual Elements
Construct meaning from word parts, context clues, connotation, and denotation for accurate comprehension of text. Evaluate word combinations to determine the author's view, tone, and purpose for writing the texts. Infer meaning from visual elements such as diagrams, charts, and photos. Pre-requisite: As determined by KCTCS Placement Policy, or completion of RDG 020. Lecture: .75 credits (11.25 contact hours).
Components: Lecture
Attributes: Remedial - Reading

RDG 1851(0.75) **Course ID: 006933**
Critical Reading
Apply Active Reading, Metacognitive processes and analyze common text structures and supporting details to improve basic critical reading skills. Pre-requisite: current KCTCS placement policy. Lecture: .75 (11.25 contact hours).
Components: Lecture

RDG 1852(0.75) **Course ID: 006934**
Valid Supports
Identify patterns of writing and discern facts from opinions to determine valid supports. Use patterns and valid supports to organize ideas for a summary or concept map. Pre-requisite: RDG 1852. Lecture: .75 (11.25 contact hours).
Components: Lecture

RDG 1853(0.75) **Course ID: 006935**
Bias and Fallacies
Interpret the author's devices for expressing the writing purpose, point-of-view and bias in informative, persuasive, and literary texts. Use this information to draw valid inferences and analyze logical reasoning from various types of texts. Pre-requisite: RDG 1852. Lecture: .75 credits (11.25 contact hours).
Components: Lecture

RDG 1854(0.75) **Course ID: 006936**
Words and Visuals
Construct meaning from vocabulary and visual elements, and use this information to summarize, map concepts, and paraphrase content to improve critical reading skills. Pre-requisite: RDG 1853. Lecture: .75 credits (11.25 contact hours).
Components: Lecture

REA Real Estate

REA 100(3) **Course ID: 000906**
Real Estate Principles I
Introduces real estate as a business and as a profession, designed to acquaint the student with the wide range of subjects necessary to the practice of real estate. Includes license law, ethics, purchase and listing agreements, brokerage, deeds, financing, appraisals, mortgages, and real estate property managements. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

REA 120(3) **Course ID: 000365**
Real Estate Marketing
Includes marketing and selling of real estate properties. Emphasizes qualifying prospects, preparing for property showings, negotiating the sale, developing a five-year goal plan, and managing time. Utilizes computer applications. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

REA 121(3) **Course ID: 000778**
Appraising
Addresses appraising residential real estate for loans, estates, condemnations, and listings, and the factors that contribute to the value of real estate. Includes three methods of estimating value with emphasis given to the market data approach. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REA 122(3) **Course ID: 000575**
Construction and Blueprints
Includes the basic concepts of construction, design, and blueprint reading. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

REA 200(3) **Course ID: 000805**
Real Estate Principles II
Continues Real Estate Principles I with emphasis on license law, finance, property management, marketing, land planning and development, brokerage management, fair housing, and appraising. Prerequisite: REA 100. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

REA 201(3) **Course ID: 000915**
Property Management
Examines the basics of managing income-producing real property. Includes management plans, tenant selection, marketing and advertising, accounting methods, net operating income statements, maintenance, and the Landlord Tenant Act. Pre-requisite: REA 100. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REA 202(3) **Course ID: 000875**
Real Estate Investments I
Introduces various types of real estate investments. Includes a comparison of investments in real estate with other types of investments. Covers basic fundamentals of investment analysis and terminology. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REA 203(3) **Course ID: 000527**
Commercial and Industrial Property
Covers classifications of commercial and industrial properties. Includes investment, environment, financing, taxes, depreciation, ownership, cash flow projection, and discount analysis. Integrates computer applications. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REA 204(3) **Course ID: 000825**
Land Planning and Development
Includes the specialized field of land planning and development with emphasis on new home construction. Includes market research, site selection and analysis, regulations, financing, earthwork, streets, and landscaping. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REA 205(3) **Course ID: 000620**
Farm Brokerage
Includes farm brokerage and specific subjects relating to the sale of farm property. Covers listing, prospecting, showing, financing, negotiating and closing the farm sale as well as the duties of the farm manager. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REA 212(3) **Course ID: 000194**
Real Estate Investments II
Includes an analysis of operations and cash flow with detailed instruction on the use and calculation of internal rate of return, financial management rate of return, operational and feasibility analysis, and model investment projections. Pre-requisite: REA 202. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REA 220(3) **Course ID: 000886**
Real Estate Brokerage Management
Includes basic real estate principles and theories as they apply to real estate brokerage management. Includes legal and work environment; brokerage management concepts; employment agreements; personnel selection, compensation, and management; policy manuals; listing and marketing management; and financial control. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

REA 221(1) **Course ID: 004772**
Basic Income Approach to Property Valuation
Provides students with a foundation in the concepts and procedures necessary in the appraisal of real estate income property. Explores how Gross Potential Income is obtained by market analysis and research, how and where to obtain all operating expenses being generated by an income-producing property, how to develop a reliable Capitalization Rate, and how to utilize Direct Capitalization Methods. Prerequisite: REA 121 or Appraiser's license. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

REA 222(1) **Course ID: 004773**
Uniform Standards of Professional Appraisal
Provides an understanding and appreciation of the Uniform Standards of Professional Appraisal Practice (USPAP) and how these standards set the minimum foundation on which both the development of an appraisal and the reporting of that appraisal must adhere and develop. Meets the pre-licensing and continuing education requirements of the Kentucky Real Estate Appraisers Board and the Appraisal Institute. Prerequisite: REA 121 or Appraiser's license. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

REA 225(3) **Course ID: 000432**
Real Estate Finance
Examines all aspects of real estate finance including financial instruments, financial institutions, buyer qualifications, and mortgage markets. Includes governmental influence, risk analysis, and financing of income-producing properties. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

REA 230(3) **Course ID: 000391**
Real Estate Law
Examines the laws and regulations pertaining to real estate and related environmental issues. Includes ownership rights, title examination, planning and zoning, contracts of sale, Fair Housing regulations, agency issues, court systems and recent court decisions. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

REA 299(1 - 3) **Course ID: 000541**
Selected Topics in Real Estate: (Topic)
Includes topics to expand course offerings as new technology and information are developed, as well as to address local real estate needs. Covers various topics from semester to semester at the discretion of the instructor. (May be repeated to a maximum of six credit hours.) Prerequisite: Consent of instructor. Lecture: 1-3 credits (15 contact hours). .
Components: Lecture

REL Religious Studies

REL 101(3) **Course ID: 000916**
Introduction to Religious Studies
Introduces students to the study of religion, emphasizing the varieties, differences, and similarities of religious experience and expression. Examines the interaction between religious experience and expression and social and cultural contexts through study of selected examples. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, SB - Social Behavior Science

REL 120(3) **Course ID: 005282**
Introduction to the Old Testament
Introduces books of the Hebrew Bible (Old Testament) using knowledge of literary forms as well as historical and cultural backgrounds to aid in the interpretation of the religious and philosophical meanings of the text. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

REL 121(3) **Course ID: 005283**
Introduction to the New Testament
Introduces New Testament using knowledge of literary forms as well as historical and cultural backgrounds to aid in the interpretation of the religious and philosophical meanings of the text. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

REL 130(3) **Course ID: 000360**
Introduction to Comparative Religion
Introduces students to a comparative analysis of world religions, emphasizing beliefs, rituals, artistic expressions, and cultural and social organization. Includes both Eastern and Western religions. (Same as ANT 130). Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: ANT 130
Attributes: Cultural Studies, AH - Arts and Humanities, SB - Social Behavior Science, Course Also
Offered in Modules REL 135(3) Course ID: 007063
01-AUG-2014
Introduction to Comparative Christianity
Provides an overview of the history of Christianity and compares the major Christian faiths and movements, their formation, and the political and social influences that caused their development. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REL 150(3) **Course ID: 007409**
Comparative Ethics of Major World Religions
Examines central theological teachings, modes of ethical reasoning, key ethical virtues and norms of major religious traditions from both Eastern and Western Religions. Considers the lives, sacred stories, dogma and texts of central religious figures as part of the context for moral thinking in a global setting. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

REL 170(3) **Course ID: 005523**
Philosophy of Religion
Introduces students to issues in philosophy of religion including defining the concept of God, arguments for and against the existence of God, the relation between faith and reason, the nature of religious experience, the problem of evil, and immortality. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, Other

REL 240(3) **Course ID: 006945**
Life and Teaching of Jesus
Investigates the life and teachings of Jesus of Nazareth through a critical analysis of the ancient sources and modern scholarly reconstructions. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

REL 241(3) **Course ID: 006946**
Life and Letters of Paul
Presents the person and thought of the Apostle Paul in social, cultural, political, philosophical, and theological context. Investigates Paul's ethics and his views as preserved in the Christian New Testament. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REL 299(3) **Course ID: 006968**
Special Topics in Religion: Topic
Examines special topics in Religion. Includes but not limited to individual religious figures, movements, sacred writings, religious traditions and selected eras. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

REL 1301(1) **Course ID: 007323**
Introduction to Religion
Introduces students to the relationship between religion, society, and the individual. Explores basic precepts of world religions through their socio-cultural development. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

REL 1302(1) **Course ID: 007324**
Major Eastern Religions
Identifies belief systems and ritual expressions of major Eastern religions. Analyzes the impact on the individual and society. Pre-requisite: REL 1301. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

REL 1303(1) **Course ID: 007325**
Major Western Religions
Identifies belief systems and ritual expressions of major Western religions. Analyzes the impact on the individual and society. Pre-requisite: REL 1301. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

RES Respiratory Care

RES 299(1 - 6) **Course ID: 003802**
Selected Topics in Respiratory Care: (Topic)
A special project or experience in Respiratory Care will be selected to enhance core material in the Respiratory Care Program. It provides the student an opportunity for independent-study and specialized instruction as approved by the instructor. This course may be repeated to a maximum of 6 hours. Lecture: variable; Laboratory: variable. Co/Prerequisite: Consent of the Instructor.
Components: Laboratory, Lecture

RES 299(1 - 4) **Course ID: 002271**
Selected Topics in Respiratory Care: (Topic)
A special project or experience in Respiratory Care will be selected to enhance core material in the Respiratory Care Program. It provides the student and opportunity for independent study and specialized instruction as approved by the instructor. This course may be repeated to a maximum of 6 hours.
Components: Lecture
Attributes: Technical

SCI Science

SCI 295(3) **Course ID: 005237**
Scientific Investigations
Real-time, hands-on research projects are carried out using the scientific method. Results of research projects may be presented at the Conference for Student Research, or other scientific meetings. Students prepare research projects for inclusion in a Handbook of Procedures Using the Scientific Method. Prerequisite: 1. Mathematics, Reading, and English assessment placement scores above developmental levels or completion of requisite developmental courses. 2. Completion of 3 credit hours of general education science area in which the research project will be carried out with grade of B or higher. 3. Consent of Instructor. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (60 contact hours).
Components: Lecture
Attributes: SN - Science

SDC Student Development

SDC 100(1) **Course ID: 004847**
College Survival Seminar
This course is designed to introduce new students to college in order to facilitate a successful college experience. Students will discover campus resources and support services available to them. Students will be introduced to career and life planning, study strategies, coping skills (i.e., stress management, interpersonal relationships), team projects, activities aimed at self discovery, and issues that impact college campuses and our global society that are important to the development of the modern college student. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Other

SDC 102(1) **Course ID: 004848**
Stress Management
Students will review various physiological and psychological approaches to stress with an emphasis on creating an awareness of how to change and manage their responses to stressful situations. Options and appropriate exercises for coping with anxiety will be presented. Topics will include time management, cognitive restructuring, health, wellness and relaxation training. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Other

SDC 104(1) **Course ID: 006187**
Transfer Planning
Increases knowledge, personal awareness, and self-efficacy related to the transfer process after completion of a two year degree. Provides information, decision-making tools, transition skills, and support to navigate the transfer process, and concluding with an individualized transfer plan to ensure successful matriculation to a four-year institution. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical

SDC 105(1) **Course ID: 004849**
Career Planning Seminar
Students will become more knowledgeable about themselves and career options. Self-assessments and vocational inventories measuring interests, work values, skills and abilities will be administered to students. Students will learn how to research careers, career alternatives and employment trends. Topics will include goal setting, decision-making and employability skills. Students will complete a personal career plan at the conclusion of the course. Lecture: 1 credit (15 contact hours).
Components: Lecture

SDC 109(1) **Course ID: 005053**
Employability Skills
This course is designed to prepare students for the world of work. Students will be introduced to self and career assessment, employability skills (i.e., the application process, resume writing, interviewing, and follow-ups), and the job market and job search strategies. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical

SED Special Education

SED 101(3) **Course ID: 000923**
Sign Language I
Includes a functional-notational approach to a beginning competency in Sign Language. Incorporates syntax, grammar, non-manual markers (behaviors) of sign language, and cultural information. (After an initial orientation period, no verbal communication will be used in the classroom.). Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Foreign Language, Cultural Studies

SED 102(3) **Course ID: 000804**
Sign Language II
Includes a functional-notational approach designed to follow SED 101 that will enhance student's knowledge of Sign Language and expand their understanding and appreciation of the people who use it. Pre-requisite: SED 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Foreign Language, Cultural Studies

SED 203(3) **Course ID: 000530**
Sign Language III
Emphasizes the practical application of signing, skills, development of cross-cultural communication abilities and vocabulary expansion. Reviews linguistic information and introduces additional linguistic materials. Pre-requisite: SED 102. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Foreign Language, Cultural Studies

SED 204(3) **Course ID: 000833**
Sign Language IV
Continues the expansion of sign vocabulary, sharpening of conversational skills including fingerspelling and numbers, semantics, morphology, syntax and other sign language features applied to conversational settings. Pre-requisite: SED 203. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Foreign Language, Cultural Studies

SET Small Engine Repair

SET 100(3) **Course ID: 002002**
Introduction to Small Engine Repair
This course introduces the student to small engines and their various applications. Also included are the identification and demonstration of hand tools, special tools, and measuring tools. It covers the selection and use of shop manuals and applying safety procedures when working with small engines. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SET 110(3) **Course ID: 002003**
Basic Small Engine Theory
This course introduces the student to the principles of construction and operation of internal combustion engines including the definitions of the following trade terms: valve overlap, reed value, two-stroke cycle engine and four-stroke cycle engine. Corequisite: SET 100. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SET 111(1) **Course ID: 002004**
Basic Small Engine Lab
This course provides applications of the theory presented in SET 110. It includes hands-on experience, step-by-step procedures for disassembling engines, identification of engine components, inspection of parts, performing precision measurements on crankshaft, cylinder bore and valves, and the reassembly of the engines. Corequisite: SET 110. Laboratory: 1 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

SET 116(3) **Course ID: 002005**
Introduction to Marine Technology
This course introduces the student to outboard and inboard motors and boats, safety practices and the operation of two-cycle and four-cycle motors. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SET 117(2) **Course ID: 002006**
Marine Electrical and Fuel Systems
This course presents electrical theory and applications for the marine technician including the marine battery, starter systems, alternator charging systems, and fuel systems. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

SET 118(3) **Course ID: 002007**
Powerhead Overhaul
This course presents instruction in overhauling two-cycle engines and repairing and/or replacing ignition systems. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SET 119(1) **Course ID: 002008**
Powerhead Overhaul Lab
This course presents hands-on experience in overhauling two-cycle motors, tuning-up motors and repairing and/or replacing ignition systems. Corequisite: SET 118. Laboratory: 1 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

SET 120(3) **Course ID: 002009**
Mid-Section, Lower Unit and Trim/Tilt
This course presents the theory and application necessary to repair and/or replace parts in the mid-section, lower unit, and trim/tilt systems in marine applications. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SET 121(2) **Course ID: 002010**
Mid-Section, Lower Unit and Trim/Tilt Lab
This course presents hands-on instruction in the theory necessary to repair and/or replace parts in the mid-section, lower units, and trim/tilt systems in marine applications. Corequisite: SET 120. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

SET 122(3) **Course ID: 002011**
Four-Cycle Engine/Stern Drive
This course presents the theory and application of repair and overhaul methods for the four-cycle engines, and how to make repairs of various stern drive systems. Prerequiste: None. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SET 123(1) **Course ID: 002012**
Four-Cycle Engine/Stern Drive Lab
This course presents hands-on training in the theory and application of repair and overhaul methods for the four-cycle engines, and how to make repairs of various stern drive systems Corequisite: SET 122. Laboratory: 1 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

SET 200(3) **Course ID: 002013**
Electrical Systems
This course presents electrical systems and their application. Basic electrical theory, including electrical pressure, current, resistance and power measured in volts, amperes, and ohms is also presented. Ohm's law will be discussed with its application to electrical circuits. Basic circuits (series, parallel, and combination of series and parallel) will be discussed. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SET 201(1) **Course ID: 002014**
Electrical Systems Lab
This course presents hands-on training in electrical systems and their application. Basic electrical theory, including electrical pressure, current, resistance and power measured in volts, amperes, and ohms is presented. Ohm's law will be discussed with its application to electrical circuits. Basic circuits (series, parallel, and combination of series and parallel) will be discussed. Corequisite: SET 200. Laboratory: 1 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

SET 210(3) **Course ID: 002015**
Ignition/Charging Systems
This course presents ignition/charging systems theory, the principle of operation of a generator/alternator system, and component identification and application. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SET 211(1) **Course ID: 002016**
Ignition/Charging Systems Lab
This course presents hands-on experience with ignition/charging systems, the principle of operation of a generator/alternator system, and component identification and application. Corequisite: SET 210. Laboratory: 1 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

SET 220(3) **Course ID: 002017**
Fuel Systems
This course introduces fuel systems used on two-cycle and four-cyle engines: the basic types, components, the types of carburetors, the types of fuel filters, and the types of fuel pumps and air filters. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SET 221(1) **Course ID: 002018**
Fuel Systems Lab
This course provides hands-on experience with fuel systems. The student will diagnose carburetor problems, rebuild diaphragm-type and float type carburetors, test carburetors and make needed adjustments, and adjust the governor according to manufacturers' specifications on two-cycle and four-cycle engines. Corequisite: SET 220. Laboratory: 1 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

SET 231(3) **Course ID: 002020**
Motorcyle Chassis Systems
After completion of this course, the student will be able to identify front fork components and service procedures for the steering assembly. The student will be able to identify the service requirements for final drives and the front fork. Instruction will be given in the inspection of brake systems, safe handling of brake fluid, replacing brake shoes and pads, and bleeding hydraulic brake systems. Laboratory: 3 credits (135 contact hours).
Components: Laboratory
Attributes: Technical

SET 233(2) **Course ID: 002021**
Carburetors and Fuel Systems
The student will be able to identify parts of a motorcycle carburetor and discuss the components and operations of various carburetor circuits. The student will also be able to remove, clean, and install a carburetor and remove, clean and install a fuel valve. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

SET 235(1) **Course ID: 002022**
Clutches and Starter Systems
Upon completion of this course the student will be able to discuss starter systems found on motorcycles and have a working knowledge of servicing kick and electric starters. The student will also be able to identify parts of a clutch, discuss guidelines for clutch service and be able to remove, disassemble, inspect and reassemble a motorcycle clutch. Laboratory: 1 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

SET 237(2) **Course ID: 002023**
Engine Tune-Up
After completion of this course the student will be able to perform motorcycle engine tune-ups including: ignition systems, replacing points and condensers, adjusting and verifying timing and service guidelines. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

SET 239(1) **Course ID: 002024**
Tools and Measurements
After completing this course the student will be able to list and demonstrate the ability to use the tools of the motorcycle technician, including hand tools, power tools, measuring instruments and specialty tools.Laboratory: 1 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

SET 240(3) **Course ID: 002025**
Four Stroke Cycle Engine
This course presents theory, repair and overhaul methods of four-cycle engines. The student will learn to inspect engines for problems, follow service manuals for measuring cylinder bore, piston fit, ring clearance, rod clearance, crankshaft clearance and valve train components. The student will use special tools including a cylinder hone, valve guide reamer, valve seat cutter, and valve grinder and demonstrate safety practices while using this equipment. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SET 241(1) **Course ID: 002026**
Four Stroke Cycle Engine Lab
In this course, students repair and overhaul four-cycle engines, inspect engines for problems, follow service manual specifications needed for measuring cylinder bore, piston fit, ring clearance, rod clearance, crankshaft clearance and valve training components. Students will use the following special tools: cylinder hone, valve guide reamer, valve seat cutter, and valve grinder. Safety practices will be observed while using the equipment. Corequisite: SET 240. Laboratory: 1 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

SET 250(3) **Course ID: 002027**
Two Stroke Cycle Engine
This course presents theory, repair and overhaul methods of two-stroke cycle engines. Students learn to inspect engines for problems, follow a service manual for measuring cylinder bore, piston fit, ring clearance, rod clearance, crankshaft clearance and valve training components. This course introduces students to the following special tools: cylinder hone, valve guide reamer, valve seat cutter, and valve grinder. Safety practices will be observed while using equipment. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SET 251(1) **Course ID: 002028**
Two Stroke Cycle Engine Lab
Students repair and overhaul two-cycle engines. Students disassemble, inspect, and service cylinder, piston rings and connecting rod, crankshaft and crankcase assembly, and demonstrate effective safety practices while using special equipment. Students also reassemble and test engines and components to standards set by manufacturer. Corequisite: SET 250. Laboratory: 1 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

SET 255(2) **Course ID: 002029**
Chassis Systems
This class presents hands-on application of the theory, repair, and overhaul methods of manual and hydrostatic transmissions. It includes how to inspect, diagnose, and repair manual and hydraulic steering systems and deck assemblies. The student will also learn how to perform preventative maintenance, adjust wheel bearings, check steering alignment and remove and replace tires. This course will introduce the student to special tools, tire changers, and the safety practices associated with the use of this equipment. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

SET 257(1) **Course ID: 002030**
Welding for Small Engines
This class introduces students to the art and science of welding. Students learn to prepare the equipment and to perform basic welding operations. Laboratory: 1 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

SET 259(2) **Course ID: 002031**
Portable Two Cycle Equipment Lab
This class will enable the student to identify the external parts of the equipment, operate equipment, handle and mix fuel, and transport and handle trimmers and saws. Instruction will be given to identify and diagnose related problems in chain saws, trimmers and other two-stroke cycle equipment. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

SET 298(2) **Course ID: 002032**
Practicum
Practicum provides supervised on-the-job work experience related to the student's education objectives. Students participating in practicum do not receive compensation. Prerequisite: Permission of Instructor. Practicum: 2 credits (150 contact hours).
Components: Practicum

SFA Safety and First Aid

SFA 100(1) **Course ID: 002034**
Safety and First Aid
Safety and First Aid is a course designed to teach current strategies relative to designated emergency situations as put forth by the National Safety Council or American Red Cross. The National Safety Council or American Red Cross standardized course qualifies a student for certification in safety and first aid. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical

SFA 101(3) **Course ID: 004735**
OSHA, Health, & Environmental Safety
The basics of OSHA compliance in addition to covering the principles of industrial health and safety, environmental regulations, and industrial requirements with a focus on personal safety and health. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SMT Surveying

SMT 110(3) **Course ID: 002035**
Principles of Surveying
Provides a study of field and office procedures for measuring distances, elevations, and horizontal and vertical angles. Covers Polaris and solar observations, state plane coordinates, control surveys, and public land surveys. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SMT 130(3) **Course ID: 006733**
Land Surveying Graphics
Covers graphical communication in surveying and mapping, fundamentals of projection, map projection theory, 3-D viewing, spatial relationships and viewpoints, plats, profiles, cross-sections, sketches for field notes and presentations in technical reports, map accuracy standards, plotting data from field notes and data collection, contour theory, and computations related to survey drafting. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SMT 160(3) **Course ID: 002038**
Construction Surveying
Provides a study of field and office procedures for the layout of construction sites. Includes theory of construction surveys for route locations, plant site, earthwork calculations, circular curves, lines, and grades. Pre-requisite: SMT 110, or Instructor Consent. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SMT 210(3) **Course ID: 006734**
Advanced Surveying Measurement
Examines the nature of measurements, statistical analysis of random errors in measurements, propagation of errors, survey standards and design specifications, development of coordinate geometry and trigonometric solutions of plane surveying problems, analysis of errors and mistakes in indirect measurement. Pre-requisite: SMT 110. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SMT 220(3) **Course ID: 004438**
Surveying Lab
Investigates field procedures for measuring distances, elevations, horizontal and vertical angles, state plane coordinates and control surveys as they pertain to boundary location, route location, construction and mine surveys. Corequisite: SMT 160. Laboratory: 3 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

SMT 230(3) **Course ID: 006735**
Land Boundary Location
Explores the role of the surveyor in retracing land boundaries, methods of boundary establishment, classification and analysis of boundary evidence, preparing deed descriptions and survey plats, preservation of survey evidence, surveyor as expert witness, liability, and professionalism in surveying. Pre-requisite: SMT 110. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SMT 250(3) **Course ID: 006736**
Mine Surveying
Introduces the theory and practice of mine surveying and use of survey instruments, for the location of drill holes, bench surveys, layout of blasting patterns, haul road layout, transfer of control from surface to underground, alignment of underground development, recording of survey information, control systems, location and selection of stations, bore hole surveys, and subsidence surveys. Pre-requisite: SMT 130 or Instructor Consent. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SMT 270(3) **Course ID: 002041**
Professional Ethics & Conduct for Land Surveyors
Explores the professional and ethical conduct of the Land Surveyor in areas of building a business, managing employees, communications, project management, and self-management. Pre-requisite: SMT 230, or Instructor Consent. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SMT 280(4) **Course ID: 004436**
Introduction to GIS and GPS
This course provides an overview of the principles and practices of Geographic Information Systems (GIS) and Global Positioning Systems (GPS). The GIS portion of the course will deal with issues of spatial data models, database design, introductory and intermediate GIS operations, and case studies of real world GIS applications. The GPS portion of the course focuses on GPS technology, software applications. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

SMT 290(3) **Course ID: 004435**
Boundary Law
This course is the survey of property law, explaining the creation, description, and maintenance of property boundaries, easements and right-of-ways. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SMT 292(1 - 6) **Course ID: 004471**
Instructor Consent Required
Special Topics
Various topics will be addressed. Laboratory: 1 - 6 credits (45 - 270 contact hours). Prerequisite: Permission of Instructor.
Components: Laboratory
Attributes: Technical

SOC Sociology

SOC 101(3) **Course ID: 000920**
Introduction to Sociology
Introduces concepts and methods of sociology including investigation of socialization, group processes, social inequality, social institutions, and social change.Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

SOC 151(3) **Course ID: 000844**
Social Interaction
Explores the fundamental sociological and social psychological processes underlying human interaction. Focuses on the dynamics of symbolic exchange, the social context and processes shaping it, and examines its effects on the formation and maintenance of social and personality systems. Prerequisite: SOC 101 or PSY 110 or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

SOC 152(3) **Course ID: 000404**
Modern Social Problems
Examines selected social problems of the day from a sociological perspective. Topics may include family, poverty, education, crime, race, housing, population, health care, industrial development, and power. Prerequisite: SOC 101 or SOC 151, or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

SOC 220(3) **Course ID: 000890**
The Community
Examines social organization and process in modern communities, both rural and urban; social techniques of community improvement. Prerequisite: Three hours of sociology or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

SOC 235(3) **Course ID: 002258**
Inequality in Society
Analyzes the nature, development, and persistence of inequality in various societies. Diverse dimensions of inequality are viewed as the basis for a number of specific social problems in Western and non-Western societies. Social origins of inequality are emphasized. Policy implications are addressed. Prerequisite: Three hours of sociology or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

SOC 249(3) **Course ID: 002259**
Media, Society, and Culture
Examines the interplay between media, culture, and society.Pre-requisite: SOC 101 or permission of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Course Equivalents: COM 249
Attributes: SB - Social Behavior Science

SOC 260(3) **Course ID: 000712**
Population, Resources and Change
Examines the relationship between human social and cultural systems and their environment. Perception, definition and policy responses to environmental, resource and population issues are explored. Prerequisite: SOC 101 or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

SOC 299(3) **Course ID: 002260**
Special Introductory Topics in Sociology
An introductory study of a selected topic in sociology. Topics may include, but are not limited to, industrial sociology, sociology of aging, gender issues, criminology, social inequalities, sociology of families, and rural sociology. Prerequisite: SOC 101 or RSO 102. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Other

SOCL Sociology

SOCL 230(3) **Course ID: 005516**
Deviant Behavior
Nature of societal rules, rule enforcers and rule breakers. Social issues and research in crime, delinquency, drug addiction, homosexuality, alcoholism, mental illness, pornography, sexuality and other forms of deviance. Emphasis on theoretical explanations and social consequences. Prerequisite: SOC 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: University Course (Western Kentucky University)

SPA Spanish Language and Literature

SPA 101(4) **Course ID: 000922**
Elementary Spanish I (spoken approach)
Introduces basic modes of communication in Spanish. Stresses speaking, listening, reading and writing as target skills. Emphasizes everyday language which the students will learn by applying essential grammatical structures to vocabulary. Provides instructional assignments and self-correctional exercises that will be practiced in the classroom. Presents an overview of the culture of various Spanish-speaking countries.
Components: Lecture
Attributes: Foreign Language, Cultural Studies, Course Also Offered in Modules

SPA 102(4) **Course ID: 000799**
Elementary Spanish II (spoken approach)
Continues to highlight the basic modes of communication in Spanish, to include present and past tense. Stresses speaking, listening, reading and writing as target skills. Emphasizes everyday language which the students will learn by applying essential grammatical structures to vocabulary.Presents an overview of the culture of various Spanish-speaking countries. Prerequisite: SPA 101, or consent of the department and placement test. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: Foreign Language, Cultural Studies, Course Also Offered in Modules

SPA 110(3) **Course ID: 003884**
Basic Conversational Spanish
Introduces pronunciation, practical structures, and basic vocabulary designed to enable students to communicate using simple Spanish in everyday situations in Spanish-speaking countries and areas of the United States. Cannot be used for major or minor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

SPA 115(3) **Course ID: 002261**
Hispanic Culture: (Country or Region)
Introduces the basic cultural patterns of a Spanish-speaking country or region through in-class experience and/or travel. May be taken up to two times with focus on different country or region. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

SPA 151(3) **Course ID: 005762**
Spanish for Health Professionals
The course will teach Spanish terminology and basic grammar related to medical patients, including vocabulary for diagnosis and treatment. Prerequisite: Prior college or high school Spanish or other experience with the Spanish language roughly equivalent to one semester of college study. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: University Course (University of Kentucky)

SPA 201(3) **Course ID: 000917**
Intermediate Spanish I
Focuses on intermediate level speaking, listening, reading, and writing skills with an emphasis on more advanced grammatical structures; emphasizes speaking the language to expand vocabulary; examines current issues, cultural nuances, and dominant Hispanic themes. Prerequisite: SPA 102, or consent of department and placement test. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Foreign Language, Cultural Studies

SPA 202(3) **Course ID: 002262**
Intermediate Spanish II
Continues intermediate level speaking, listening, reading, and writing skills from SPA 201 with an emphasis on more advanced grammatical structures; focuses on speaking the language to expand vocabulary; examines current issues, cultural nuances, and dominant Hispanic themes. Prerequisite: SPA 201 or consent of department and placement test. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Foreign Language, Cultural Studies

SPA 211(3) **Course ID: 004678**
Spanish Conversation
Sections limited to no more than 15 students each. Oral-aural practice in spoken language. Special emphasis placed on the acquisition of idioms and fundamental conversational vocabulary. Pre-requisite: SPA 202 or equivalent or consent from the department. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SPA 1011(0.8) **Course ID: 006222**
Spanish Greetings & Farewells
Highlights greetings and farewells in simple conversations; introduces the present tense of the verb ser (to be); explores the geography, culture, history and political issues of Spanish speaking countries with focus on Hispanics in the United States. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

SPA 1012(0.8) **Course ID: 006223**
Spanish for School Life
Introduces basic modes of communication to discuss school life and everyday activities; focuses on asking questions and describing people and things; introduces the present tense of estar (to be) and -ar; explores the geography, culture, history and political issues of Spanish speaking countries with focus on Spain. Prerequisite: SPA 1011. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

SPA 1013(0.8) **Course ID: 006224**
Spanish for Family and Friends
Features descriptions of family and friends; focuses on using possessive and descriptive adjectives; introduces the present tense of -er and -ir verbs, uses the verbs tener and venir to express needs and state of mind; explores the geography, culture, history and political issues of Spanish speaking countries with focus on Ecuador. Prerequisites: SPA 1013. Lecture: 0.8 credit (12 contact).
Components: Lecture

SPA 1014(0.8) **Course ID: 006225**
Spanish for Pastime Activities
Presents conversations regarding Pastimes and activities; focuses on the present tense of the verbs ir, select stem-changing and verbs with irregular yo forms, in the context of making plans and describing events; explores the geography, culture, history and political issues of Spanish speaking countries with focus on Mexico. Prerequisite: SPA 1013. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

SPA 1015(0.8) **Course ID: 006226**
Spanish for Travel
Presents conversations to discuss and plan a vacation; expands communication to talk about feelings; introduces the present progressive tense and compares the verbs "ser" and "estar" to express descriptions, conditions and emotions; explores the geography, culture, history, and political issues of Spanish speaking countries. Pre-requisite: SPA1014. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

SPA 1021(0.8) **Course ID: 006227**
Spanish for Shopping
Highlights conversations and vocabulary in the shopping setting; introduces verbs for to know and practices answering questions of to whom or for whom an action is done; presents preterit to express past tense; explores the geography, culture, history, and political issues of Spanish speaking countries with focus on Cuba. Prerequisite: SPA 101. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

SPA 1022(0.8) **Course ID: 006228**
Spanish for Daily Routines
Presents descriptions of the daily routine; introduces reflexive verbs and the irregular preterit of ser (to be) and ir (to go); highlights the verb gustar and verbs like gustar; presents negative statements; explores the geography, culture, history, and political issues of Spanish speaking countries with focus on Peru. Prerequisite: SPA 1021. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

SPA 1023(0.8) **Course ID: 006229**
Spanish for Restaurant Settings
Features dialogs for ordering in a restaurant and describing food, for explaining where you are and for talking about familiar people and places; introduces the preterit of stem-changing verbs, comparatives and superlatives and indirect object pronouns and direct object pronouns; explores the geography, culture, history, and political issues of Spanish speaking countries with focus on Guatemala. Prerequisite: SPA 1022. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

SPA 1024(0.8) **Course ID: 006230**
Spanish for Celebrations
Highlights conversations of congratulations and gratitude and discussing different stages of life; presents irregular preterits; discusses pronouns as prepositions; explores the geography, culture, history and political issue of Spanish speaking countries with focus on Chile. Prerequisite: SPA 1023. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

SPA 1025(0.8) **Course ID: 006231**
Spanish for Health Care
Presents dialog to talk about medical conditions; contrasts the imperfect and preterit past tense; illustrates impersonal constructions with se; explores the geography, culture, history, and political issues of Spanish speaking countries with focus on Costa Rica. Prerequisite: SPA 1024. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

STA Statistics

STA 111(3) **Course ID: 007218**
Sport Statistics
Introduces students to concepts within the sports world where math and statistics skills are applied. Includes analysis of sports formulas, processes, and calculations. Applies mathematical models and ranking methods to the sports world. Assumes students will have a general knowledge and interest in sports. Pre-requisite or Co-requisite: MAT 065. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

STA 200(3) **Course ID: 006640**
Statistics: A Force in Human Judgment
This course is concerned with the interaction of the science and art of statistics with our everyday lives emphasizing examples from the social and behavioral sciences. The student will not be required to learn mathematical formulas. Topics include the nature of statistics, uses and misuses of statistics, the scope and limitations of statistics, criteria by which published statistics may be judged, interpretation of probability and the art of decision making. Prerequisite: Completion of the mathematics basic skills requirement.
Components: Lecture
Attributes: QR - Quantitative Reasoning, University Course (University of Kentucky)

STA 210(3) **Course ID: 005196**
Statistics: A Force in Human Judgement
Examines the interaction of the science and art of statistics in everyday life emphasizing examples from the social and behavioral sciences including the nature, scope, limitations, and interpretation of statistics. Prerequisite: MAT 145 or MAT 150 or equivalent. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning

STA 210(3) **Course ID: 007335**
Making Sense of Uncertainty: An Introduction to Statistical Reasoning
The goal of this course is to help students develop or refine their statistical literacy skills. Both the informal activity of human inference arising from statistical constructs, as well as the more formal perspectives on statistical inference found in confidence intervals and hypothesis tests are studied. Throughout, the emphasis is on understanding what distinguishes good and bad inferential reasoning in the practical world around us. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: University Course (University of Kentucky)

STA 215(3) **Course ID: 006938**
Introduction to Statistical Reasoning
Introduction to descriptive statistics, normal distributions, linear correlation and regression, sampling, experiments, chance phenomena, one- and two-sample estimation and hypothesis testing, chi-square tests, and use of statistical software. Pre-requisites: Completion of all developmental requirements (reading, writing, and mathematics). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: University Course (Eastern Kentucky University)

STA 220(3) **Course ID: 005197**
Statistics
Examines statistical description of sample data including frequency distributions, measures of central tendency, and measures of dispersion. Includes theoretical distributions, statistical estimation, and hypothesis testing. Introduces simple linear regression and correlation. Prerequisite: MAT 150 or equivalent. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning, Course Also Offered in Modules

STA 291(3) **Course ID: 006641**
Statistical Method
Introduction to principles of statistics. Statistical description of sample data including frequency distributions, measures of central tendency, and measures of dispersion. Theoretical distributions, statistical estimation, and hypothesis testing. Introduction to simple linear regression and correlation. Pre-requisites: MA 113, MA 123 or equivalent. Lecture: 3.0 Credits (45 Contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning, University Course (University of Kentucky)

STA 296(3) **Course ID: 016128**
Statistical Methods and Motivations
Introduction to principles of statistics with emphasis on conceptual understanding. Students will articulate results of statistical description of sample data (including bivariate), application of probability distributions, confidence interval estimation and hypothesis testing to demonstrate properly contextualized analysis of real-world data. Prerequisite: MA 113, MA 123, MA 137, or equivalent. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: University Course (University of Kentucky)

STA 2201(1) **Course ID: 007406**
Descriptive Statistics
Examines statistical description of sample data including frequency distributions, measures of central tendency, and measures of dispersion. Pre-requisite: MAT 150 or equivalent. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

STA 2202(1) **Course ID: 007407**
Probability Distributions
Examines theoretical distributions and statistical estimation. Pre-requisite: STA 2201. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

STA 2203(1) **Course ID: 007408**
Statistical Inference
Examines hypothesis testing and introduces simple linear regression and correlation. Pre-requisite: STA 2202. Lecture: 1.0 credit (15 contact hours).
Components: Laboratory

SUR Surgical Technology

SUR 100(12) **Course ID: 002046**
Surgical Technology Fundamentals Theory
Provides an overview of the history of surgery and the role of the surgical technologists, including professional responsibilities, developing a professional resume, legal and ethical considerations, interpersonal relationships and communication skills. Incorporates safety, hazards preparation, aseptic technique and duties of the scrubbed and the circulating surgical technologist during a surgical procedure. Provides information for the performance and completion of surgical procedures including general surgery, ob/gyn with attendant specialty equipment, abdominal incisions, wound closures, and standard precaution skills. Pre-requisite: Minimum C grade in [BIO 135 or (BIO 137 and BIO 139)] and (AHS 115 or CLA 131 or MIT 103) and (BIO 225 or BIO 226 or BIO 227 or BIO 118); Current CPR certification for Healthcare Professionals. Corequisite: SUR 101 and SUR 125 and SUR 130. Lecture: 12 credits (180 contact hours).
Components: Lecture
Attributes: Technical

SUR 101(1) **Course ID: 002047**
Surgical Technology Fundamentals Lab
Provides opportunity for demonstration of skills required to prepare the patient, operating room, basic equipment, and supplies; and to function as a member of an operating room team. Incorporates OSHA safety standards, aseptic technique, and duties of both the scrubbed and circulating technologist during a surgical procedure. Prerequisite: Minimum "C" grade in [BIO 135 or (BIO 137 and BIO 139)] and (AHS 115 or CLA 131 or OST 103) and (BIO 225 or BIO 226 or BIO 227 or BIO 118). Current CPR certification for Healthcare Professionals. Co-requisite: SUR 130. Prerequisite or Corequisite: SUR 100 or (SUR 109 and SUR 110). If pre-requisite, the student must achieve a grade of "C" or greater. Laboratory: 1.0 credit (90 contact hours).
Components: Laboratory
Attributes: Technical

SUR 103(1) **Course ID: 002048**
Surgical Technology Supplemental Lab
Provides opportunity for supplemental practice of skills required to prepare the patient, operating room, basic equipment, and supplies; and to function as a member of an operating room team. Incorporates OSHA safety standards, aseptic technique, and duties of both the scrubbed and circulating technologist during a surgical procedure. Prerequisite: [BIO 130 or BIO 135 or (BIO 137 and BIO 139)] and (AHS 115 or CLA 131 or OST 103) and (AHS 130 or BIO 225 or BIO 227 or BIO 118). Current CPR certification for Healthcare Professionals. All prerequisites must be achieved with a grade of "C" or greater. Corequisite: SUR 130. Pre-requisite Or Co-requisite: SUR 101. Lab: 1.0 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

SUR 109(3) **Course ID: 005375**
Introduction to Surgical Technology
Provides a brief overview of the history of surgery and an in-depth introduction of the role and responsibilities of the surgical technologists, an integral health care professional in the delivery of perioperative patient care and surgical services; including professional responsibilities, developing a professional resume, legal and ethical considerations, interpersonal relationships and communication skills. Introduces the basics of biomedical science and identifying information resources. Introduces all-hazards preparation for the surgical technologist, basic principles of aseptic technique, sterilization, surgical scrub, gown and gloving and basic instruments used in surgery along with correlating the impact of microbiology in relationship to the practice of sterile technique and infection control in the operative setting. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

SUR 110(9) **Course ID: 005470**
Surgical Technology Fundamentals
Incorporates safety, aseptic technique and duties of the scrubbed and the circulating surgical technologist during a surgical procedure; Provides indepth information for the successful preparation, performance, and completion of basic surgical procedures; Addresses specialty areas of general surgery, ob/gyn with attendant specialty equipment; Introduces the theory of abdominal incisions, wound closures, and standard precaution skills in each clinical assignment; Includes biomedical sciences of electricity, physics, and robotics as they pertain to surgical technology. Prerequisite: Admission to Surgical Technology program, current CPR or BLS certification, SUR 109, AHS 115 or consent. Lecture: 9 credits (135 contact hours).
Components: Lecture
Attributes: Technical

SUR 125(2 - 3) **Course ID: 002049**
Surgical Technology Skills Practicum I
Provides experience in a healthcare setting performing the duties of a scrubbed and/or circulating technologist during an assigned surgical procedure with an emphasis on OSHA standards. Prerequisite: Minimum C grade in SUR 101. Current CPR certification for Healthcare Professionals. Corequisite: SUR 100 or (SUR 109 and 110). Pre-requisite Or Co-requisite: SUR 130. Clinical: 2.0 - 3.0 credits (120 - 180 contact hours).
Components: Clinical
Attributes: Technical

SUR 130(2) **Course ID: 002050**
Principles of Surgical Pharmacology
Introduces the fundamental principles of the clinical use of drugs. Emphasizes the role and responsibility of the surgical technologist related to drugs, a review of basic mathematic skills, a thorough knowledge of the systems of measurement, and conversion and application of skills to perform dosage calculations. Presents information related to medicines in common use in the surgical setting. Prerequisite: Minimum "C" grade in [BIO 135 or (BIO 137 and BIO 139)] and (AHS 115 or CLA 131 or OST 103) and (BIO 225 or BIO 226 or BIO 227 or BIO 118); Current CPR certification for Healthcare Professionals. Co-requisite: SUR 100 - SUR 101. Corequisite or Prerequisite: SUR 125. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

SUR 200(9) **Course ID: 002051**
Surgical Technology Advanced Theory
Focuses on the relevant anatomy, indications for surgery, patient preparation, special equipment and supplies, purpose, expected outcomes, and possible complications of specialty areas following OSHA standards. Prerequisite: Minimum grade of "C" in [(SUR 100 or (SUR 109 and SUR 110))] and SUR 125 and SUR 130. Co-requisite: SUR 201. Lecture: 9.0 credits (135 contact hours).
Components: Lecture
Attributes: Technical

SUR 201(6 - 7) **Course ID: 002052**
Surgical Technology Skills Practicum II
Provides opportunity for application of techniques learned in SUR 200 in a healthcare setting performing the duties of a scrubbed and/or circulating technologist during an assigned surgical procedure with an emphasis on OSHA standards. Prerequisite: Minimum grade of "C" in [SUR 100 or (SUR 109 and 110)] and SUR 125 and SUR 130. Corequisite: SUR 200. Clinical: 6.0 - 7.0 credits (360-420 contact hours).
Components: Clinical
Attributes: Technical

SUR 275(2) **Course ID: 002053**
Surgical Technology Advanced Practicum
Provides an advanced experience in a healthcare setting performing the duties of a scrubbed and/or circulating technologist during an assigned surgical procedure with limited supervision. Prerequisite: Minimum grade of "C" in SUR 200 and SUR 201. Practicum: 2.0 credits (120 contact hours).
Components: Practicum
Attributes: Technical

SUR 280(5) **Course ID: 004246** **Department Consent Required**
Surgical Anatomy
Provides accurate information about the structure and function of the human body. Intended for students who are pursuing a career as a Surgical First Assistant. Prerequisite: Surgical Technologist or CNOR. Corequisite: SUR 284 & SUR 295. Lecture: 5.0 credits (75 contact hours).
Components: Lecture
Attributes: Technical

SUR 282(3) **Course ID: 004247**
Perioperative Bioscience
Promotes an understanding of microbial physiology which precedes the understanding of disease transmission and/or prevention; Emphasizes standard precautions and infection control; Contains pharmacology section designed to promote understanding of effects of pre, post and operative drugs; Includes anesthesia section designed to promote understanding of general principles/techniques and drugs used by anesthesia and effects on the patient; Introduces the student to the following: diagnostic testing such as radiology, laboratory, cardiographics, wound healing, nutrition perioperatively, fluid and electrolyte balance, and techniques in maintaining homeostasis. Prerequisite: Program admission and student must be a certified Surgical Technologist or an RN with operating room experience. Student must provide current documentation of certification. Prerequisite: SUR 280 & SUR 284& SUR 295. Corequisite: SUR 296. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SUR 284(3) **Course ID: 004248**
Principles of Surgical Assisting
Introduces the student to the theory involved in surgical assisting; Incorporates anatomy, surgical techniques, aseptic techniques, draping, positioning, suturing, safety, and duties of the surgical team. Prerequisite: Program admission. Student must be a certified Surgical Technologist or an RN with operating room experience OR consent. Corequisite: SUR 280 & SUR 295. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

SUR 295(1) **Course ID: 004250**
Surgical First Assistant Clinical
Includes the performance of entry level duties of a surgical assistant in a clinical setting under the supervision of a qualified preceptor. Follows the Commission on Accreditation of Allied Health programs Surgical Assistant Core Curriculum related to the nature of the cases and the duties involved. Prerequisite: Program admission. Co-requisite: SUR 280 and SUR 284. Clinical: 1 credit hour (45 contact hours).
Components: Clinical
Attributes: Technical

SUR 296(3) **Course ID: 006666**
Surgical First Assistant Practicum
Involves advanced training in the preoperative, operative, and postoperative phases of surgery. Exposes student to wide variety of surgical procedures. Emphasizes surgical anatomy, along with critical thinking skills, in every surgical procedure under the supervision of a surgeon who is responsible for overseeing the clinical educational experience of the student. Pre-requisite: SUR 280, SUR 284 and SUR 295. Co-requisite: SUR 282. Practicum: 3.0 credits (270 contact hours).
Components: Practicum
Attributes: Technical

SUR 297(1) **Course ID: 016240**
Surgical First Assistant Practicum II
Involves advanced training in the preoperative, operative, and postoperative phases of surgery. Exposes student to wide variety of surgical procedures. Emphasis on advanced anatomical knowledge that is applied towards the surgical diagnosis, along with critical thinking skills, in every surgical procedure under the supervision of a surgeon who is responsible for overseeing the clinical educational experience of the student. Pre-requisite: SUR 280, SUR 284, SUR 295, SUR 282, SUR 296. Practicum: 1 credit (90 contact hours)
Components: Practicum
Attributes: Technical

SUR 2011(2) **Course ID: 016845**
Surgical Skills I
Provides opportunity for application of techniques in a healthcare setting performing the duties of a scrubbed and/or circulating technologist during an assigned surgical procedure with an emphasis on OSHA standards. Includes otorhinolaryngologic, plastic and reconstructive, and oral and maxillofacial procedures. Practicum: 2.0 credits (120 contact hours).
Components: Practicum

SUR 2012(4 - 5) **Course ID: 016846**
Surgical Skills II
Provides opportunity for application of techniques in a healthcare setting performing the duties of a scrubbed and/or circulating technologist during an assigned surgical procedure with an emphasis on OSHA standards. Includes genitourinary, orthopedic, neurosurgery, cardiovascular, peripheral vascular, and ophthalmic surgical procedures. Pre-requisite: SUR 2011. Co-requisite: SUR 200. Practicum: 4.0-5.0 credits (240-300 contact hours)
Components: Practicum

SUS Sustainability

SUS 101(3) **Course ID: 016179**
Introduction to Sustainability
Introduces the concept of sustainability and its varied interpretations; the core concepts in the study of sustainability. Provides an overview and perspective of issues in sustainability from multiple disciplines and viewpoints. Pre-requisite: Current KCTCS placement scores for College level reading and writing. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, Other

SUS 102(3) **Course ID: 016180**
Sustainable Built Environment
Introduces the ideas of sustainability in the built environment, our history of construction and expansion, and buildings and how they interact with the natural environment. Explores issues from the perspective of sustainable planning, design, and construction issues across disciplines. Pre-requisite: Current KCTCS placement scores for College level reading and writing. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, Other

SUS 201(3) **Course ID: 016181**
Sustainable Societies
Examines sustainability concepts, values, and institutional contexts as they are manifested in societal frameworks in the U.S., and globally. Includes topics such as urban agriculture, individual or community based environmental conservation efforts, corporate sustainability programs, as well as cultural and societal implications of resource allocations as they pertain to equity and social justice. Pre-requisite: Current KCTCS placement scores for College level reading and writing. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, Other

SUS 202(3) **Course ID: 016182**
Sustainable Urban Systems
Investigates the physical and social urban infrastructure networks as they relate to sustainability. Examines the institutions, as well as the formal and informal rules, that use, manage, or govern urban physical and social infrastructures. Considers the role of private groups, non-profits, and other organizations and the networks and systems of support that exists for environmental and sustainable-oriented activity. Pre-requisite: SUS101 Intro. To Sustainability & SUS201 Sustainable Societies. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, Other

SWK Social Work

SWK 124(3) **Course ID: 000584**
Introduction to Social Services
Introduces social welfare concepts and philosophies. Examines the profession of social work and its philosophy and value commitments within social welfare. Covers public and private service delivery systems. (Required of social work majors and recommended it be taken the first year.) Lecture: 2.0 credits; Lab: 2.0 credits.
Components: Laboratory, Lecture
Attributes: Technical

SWK 180(3) **Course ID: 000154**
Introduction to Gerontology
The major biological, psychological, and sociological issues facing America's aging population are examined. Attention is also focused on the resources available to meet needs of older Americans. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SWK 220(3) **Course ID: 005587**
Cultural Diversity in Human Services
Explores current and historical cultural diversity in human services as it applies to clients from various cultural groups. Focuses on cultural self awareness and cultural competence as it pertains to human services professionals and client helper relationships. Draws attention to dominant and minority cultural norms, attitudes and belief systems including the culture of poverty. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: HMS 220
Attributes: Technical

SWK 222(3) **Course ID: 000484**
Development of Social Welfare
Includes cultural traditions, value orientations, and political and economic forces which have contributed to the emergence of present social welfare policies and systems in the United States. (Required of social work majors and open to all others.) Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SWK 255(3) **Course ID: 005584**
Introduction to Addictions
Provides an overview of approaches to understanding addictions with emphasis on the bio-psycho-social model. Analyzes the etiology, progression, and processes involved in change. Prerequisite: PSY 100 or PY 110 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: HMS 211
Attributes: Technical

SWK 260(3) **Course ID: 005586**
Crisis Intervention
Focuses on crisis intervention theory, suicide prevention, and risk assessment techniques. Covers risk assessment protocols, crisis triage, de-escalation and referral. Introduces clinical, ethical and legal aspects. Prerequisite: PSY 100 or PY 110 or permission from instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: HMS 212
Attributes: Technical

SWK 269(3) **Course ID: 000304**
Juvenile Delinquency
The history, nature, and extent of juvenile delinquency are studied including an examination of trends and methods of treatment in contemporary society. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SWK 275(3) **Course ID: 000736**
The Family
Covers the nature and structure of family systems and examination of major family issues. Includes discussion in patterns of family interaction with attention paid to resources designed to meet family needs. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

SWK 281(3) **Course ID: 000734**
Psychology of Aging
A study of the aging process with emphasis on the needs, roles, and attitudes of seniors in our society. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

TA Theatre

TA 195(1 - 3) **Course ID: 004554**
Instructor Consent Required
Special Projects in Theatre Arts (Project Title)
Projects in Theatre Arts that are not otherwise covered by or extend beyond the scope of TA 190, TA 191 or other theatre arts course offerings. Projects may include, but are not limited to, practical application of techniques in special circumstances; special theatre tours; research projects that will be used as the basis of a practical application project; or theatrical workshop projects designed to cover a special area of practice. Projects will be selected by the instructor and may be repeated with different titles for up to six credit hours. Lecture: 1-3 credits (15-45 contact hours); Laboratory: 1-3 credits (60-180 contact hours). Prerequisite: Consent of Instructor.
Components: Laboratory, Lecture
Attributes: Other

TA 264(3) **Course ID: 002268**
Makeup for the Theatre
Theory and practice in the principles, materials and application of makeup. Lecture, two hours; laboratory, two hours. Prerequisite: TA 150 or consent of instructor.
Components: Laboratory, Lecture
Attributes: Other

TEC Technical Communication

TEC 10(3) **Course ID: 002071**
Developmental Writing for the Workplace
This course is designed to allow students to survey grammar and punctuation skills, which are essential to writing. Emphasis is on clarity and exactness as required to communicate effectively in today's workplace. Prerequisite: None
Components: Lecture
Attributes: Remedial - English

TEC 200(3) **Course ID: 002073**
Technical Communications
Focuses on written and oral communications in a technical environment, including a review of grammar, usage, mechanics, and punctuation. Emphasizes preparing business communications such as letters and application materials, creating technical reports and sets of instructions, creating proposals or presentation materials, and developing appropriate technical communication styles for various audiences. Covers professional use of email, social media, websites, and other electronic resources. Pre-requisite: Placement in college level writing or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

TEC 2001(1) **Course ID: 016244**
Technical Communication Basics
Covers basic principles of technical communication, including definition of technical communication, audience analysis and adaptation, technical communication style, research strategies, creation of visual aids, appropriate use of social media, websites, and other electronic resources. Includes a review of grammar, usage, mechanics and punctuation. Pre-requisites: Placement in college level writing or Consent of Instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

TEC 2002(1) **Course ID: 016245**
Communication Applications
Emphasizes preparing business communications in a technical environment such as sets of instructions, technical reports, and proposals. Covers professional use of email. Includes a review of grammar, usage, mechanics, and punctuation. Pre-requisite: TEC 2001. Lecture: 1 credit (15 contact hours)
Components: Lecture

THA Theatre

THA 101(3) **Course ID: 000925**
Introduction to Theatre: Principles and Practice
Cultivates students judgment, perception, and creative response to theatre, emphasizing what and how theatre communicates through examining both processes and products of theatre.
Components: Lecture
Attributes: AH - Arts and Humanities

THA 126(3) **Course ID: 000774**
Acting I: Fundamentals of Acting
Explores a broad spectrum of skills in the creative process of acting ensemble. Includes improvisation, movement disciplines (including theatre games, modern dance, and characterization), emotional and sensory awareness, and the process of integrating these into a clearly defined stage technique. Lecture: 3 hours; Laboratory: 2 hours.
Components: Laboratory, Lecture
Attributes: Other

THA 127(3) **Course ID: 002264**
Acting Techniques
Uses movement exercises, sensory work, theatre games and basic stage combat exercises to heighten physical awareness, release personal blocks, and discover the experience of being truthful with fellow actors. Continues with students moving on to individual work to establish physical techniques they will use when working on a production. Provides an exploration of physical and emotional awareness and development of a more creative use of their imaginations.Lecture: 1.0 credit hour (15 contact hours) Lab: 2.0 credit hours (90 contact hours). Prerequisite: THA 126.
Components: Laboratory, Lecture
Attributes: Other

THA 141(3) **Course ID: 006781**
Costuming & Make-up for the Stage
Develops an understanding of the basic elements of costume and make-up design and application. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Other

THA 150(3) **Course ID: 002265**
Fundamentals of Production
Includes a comprehensive study of the basic organizational structure, processes and techniques involved in theatre design, technology and management. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

THA 190(1) **Course ID: 000031**
Instructor Consent Required
Production Practicum
Provides study and practice of production techniques through rehearsal and performance. Practicum: 1.0 credit (45 contact hours).
Components: Practicum
Attributes: Technical

THA 191(1) **Course ID: 002266**
Instructor Consent Required
Performance Practicum
Provides study and practice of acting and directing through rehearsal and performance. Practicum: 1.0 credit hour (45 contact hours).
Components: Practicum
Attributes: Other

THA 192(1) **Course ID: 015596**
Production Practicum
Provides study and practice of production techniques through rehearsal and performance. Practicum: 1.0 credit (45 contact hours).
Components: Practicum
Attributes: Other

THA 193(1) **Course ID: 015597**
Performance Practicum
Provides study and practice of acting and directing through rehearsal and performance. Practicum: 1.0 credit (45 contact hours).
Components: Practicum
Attributes: Other

THA 196(3) **Course ID: 004032**
Instructor Consent Required
Summer Theatre Workshop
Includes studies in the theory and application of acting, directing and production principles supplemented by written assignments to be determined by the college Theatre program. Admission by audition or selection by director/college staff. Open to apprentice students in a Summer Theatre program. Prerequisite: Acceptance by audition or selection by director/college staff. Lab: 1.0 - 3.0 credit hours (45 - 125 contact hours).
Components: Laboratory
Attributes: Technical

THA 200(3) **Course ID: 003810**
Introduction to Dramatic Literature
Provides a study of representative dramatic literature from Greek Antiquity to the present.
Components: Lecture
Attributes: AH - Arts and Humanities

THA 203(3) **Course ID: 004433**
Acting for the Camera
Includes a fundamental approach to auditioning and acting for the camera. Prerequisite: THA 126. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

THA 226(3) **Course ID: 000791**
Acting II: Scene Study (Realism)
Concentrates on several components of the acting process: preliminary study in modern acting theories, Stanislavski to the present; textual analysis, character study and scene work; studio exercises aimed at refining rehearsal skills for the actor. Prerequisite: THA 126 or Consent of Instructor. Lecture: 2.0 credit hours (30 contact hours). Laboratory: 1.0 credit hour (15 contact hours).
Components: Laboratory, Lecture
Attributes: Other

THA 227(3) **Course ID: 002267**
Acting III: Scene Study (Styles)
Introduces the actor to a performance style other than realism while continuing to develop the actor's skills in analysis and rehearsal. Prerequisite: THA 226 or Consent of Instructor. Lecture: 2.0 credit hours (30 contact hours). Lab: 1.0 contact hour (15 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

THA 230(3) **Course ID: 015598**
Unarmed Stage Combat
Provides a study of unarmed combat for the stage from both the classic and contemporary approaches to staging violence. Techniques for punches, slaps, kicks, falls, and rolls will be covered. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

THA 250(3) **Course ID: 006782**
Stage Electrics
Provides a comprehensive study of sound production and stage lighting in principle and practice. It concentrates on the fundamentals of circuits, instrumentation, and operation of stage lights and sound. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (90 contact hours).
Components: Laboratory, Lecture
Attributes: Pilot Course, Technical

THA 260(3) **Course ID: 000717**
Stagecraft
Provides a study of theory, principles and techniques of scenic design and construction. Includes assignments in practical applications. Lecture: 2.0 credit hours (30 contact hours). Lab: 1.0 credit hour (75 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

THA 283(3) **Course ID: 000111**
American Theatre
Surveys American theatre history, giving particular emphasis to the late nineteenth and twentieth centuries, examining both theatre practice and dramaturgy and placing them within an historical, social, and cultural context. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

TRU Truck Driving

TRU 100(6) **Course ID: 002092**
Truck Driving
The purpose of the program is to prepare individuals as professional drivers for the truck driving industry. The course content is designed to familiarize students with the fundamental and operational procedures to become professional truck drivers. This is the entire curriculum. It is not divided into individual courses. Prerequisite: CDL Permit
Components: Laboratory, Lecture
Attributes: Technical

UPH Upholstery

UPH 100(3) **Course ID: 002093**
Introduction to Upholstery
This course introduces the student to the variety of careers in the upholstery business and provides an overview of the industry including furniture manufacturing, furniture reupholstery and repair and employment opportunities. Tools, equipment and techniques used in upholstering are discussed. The terms used in industry are stressed. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

UPH 101(1) **Course ID: 002094**
Introduction to Upholstery Lab
This course provides practical experience in the use of tools, equipment, and techniques of the upholstery industry. Laboratory: 1 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

UPH 110(3) **Course ID: 002095**
Upholstery Fabrics and Materials
This course introduces the student to various materials used in upholstering, the techniques for using each material, selection of upholstery fabrics and details concerning the usage of each fabric.
Components: Lecture
Attributes: Technical

UPH 111(1) **Course ID: 002096**
Upholstery Fabrics and Materials Lab
This course provides practical experience in the use of upholstery fabrics, material and equipment. Laboratory: 1 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

UPH 120(1) **Course ID: 002097**
Furniture Preparation
This course introduces the student to the various techniques used in the stripping and repair of furniture frames and to the installation of webbing and springs. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical

UPH 121(2) **Course ID: 002098**
Furniture Preparation Lab
This course provides practical experience in the use of various techniques used in the stripping and repairing of furniture frames and to the installation of webbing and springs. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

UPH 126(1) **Course ID: 002100**
Padding Installation Lab
This course provides practical experience in the use of padding furniture for upholstery purposes. Laboratory: 1 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

UPH 131(4) **Course ID: 002101**
Final Cover Fabrication and Installation Lab
This course provides practical experience in the use of various aspects of padding furniture for upholstery. The methods and materials used in making cushions and techniques and materials used in channeling and tufting processes are also taught in this course. Laboratory: 4 credits (180 contact hours).
Components: Laboratory
Attributes: Technical

UPH 151(2) **Course ID: 002102**
Small Frame Fabrication and Upholstering Lab
This course introduces the student to design and manufacture of small upholstery frames. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

UPH 198(5) **Course ID: 002103**
Practicum I
Practicum provides supervised on-the-job work experience related to the student's education objectives. Students participating in practicum do not receive compensation. Prerequisite: Permission of Instructor. Practicum: 5 credits (375 contact hours).
Components: Practicum
Attributes: Technical

VCA Visual Communications Art and Design

VCA 102(3) **Course ID: 002108**
Fundamentals of Drawing
Introduces basic drawing skills and concepts as it relates to graphic design. Emphasizes how to create form in space and to draw in proper perspective for reproduction purposes. Students must receive a letter grade of "C" or better. Lecture/Lab 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCA 105(3) **Course ID: 016768**
Drawing Concepts
Develop drawing skills and illustration concepts as they apply to graphic design. Emphasizes how to create form in space and to draw in proper perspective for reproduction purposes. Students must receive a final grade of "C" or better to advance in all Visual Communication courses. Lecture/Lab: 3 credits (60 contact hours).
Components: Lecture
Attributes: Technical

VCA 106(3) **Course ID: 002113**
Creative Typographical Design
Explores the use of type as a major element of design to solve visual communication problems. Includes the use of layout markers to creatively manipulate type forms and produce interesting, attractive type-only designs. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

VCA 108(3) **Course ID: 002110**
Digital Color Theory
Explores the visual dynamics of color as it relates to graphic design, including the basic characteristics of color; hue, value, and saturation. Explores color perception and psychology; color harmonies and schemes using color wheels; RGB, CMYK, Pantone and ICC Profiles; and color correction. Students must receive a letter grade of "C" or better. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

VCA 120(3) **Course ID: 002116**
Digital Photography I
Introduces the skills and techniques to capture and process digital photographs. Emphasizes basic digital camera operations and lighting techniques. Includes proper techniques to import and organize photographs. Introduces basic Photoshop skills to manipulate and enhance digital photographs. Includes discussions on appropriate resolutions and file formats. Students must receive a letter grade of "C" or better. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCA 131(3) **Course ID: 016774**
Digital Photography II
Explores advanced skills and techniques to capture digital photographs using various camera functions and lenses. Includes proper scanning techniques and file formats. Explores advanced skills in Adobe Photoshop to manipulate photographs for interesting compositions. Introduces RAW shooting and Camera RAW in Photoshop. Explores proper presentation skills for professional photography displays. Students must receive a final grade of `C' or better to advance in all Visual Communication courses. Pre-requisite: VCA 120 and VCC 166. Lecture/Lab: 3 credits (90 contact hours)
Components: Lecture
Attributes: Technical

VCA 132(3) **Course ID: 000201**
Illustration For Advertising
Develops skills in visualization and illustration techniques as they apply to advertising and graphic design. Emphasizes visual interpretation of narrative textual information (such as a story, poem or magazine article), editorials, advertising, and books. Uses a variety of media from traditional media to digital media to create professional illustrations as elements of advertising. Students must receive a letter grade of "C" or better. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

VCA 151(3) **Course ID: 005382**
Digital Filmmaking I
Provides training in non-studio video production and editing. Includes applied aesthetics and production of dramatic, informational or experimental work on video. Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

VCA 152(3) **Course ID: 005383**
Digital Filmmaking II
Provides training in computer based editing and pre-production planning. Includes applied aesthetics of video editing production of dramatic, informational or experimental work on video. Pre-requisite Or Co-requisite: VCA 160 and VCC 166 with a grade of "C" or better. Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

VCA 160(3) **Course ID: 000203**
Commercial Photography I
Teaches the use of 35 mm cameras, printers, enlargers, and laboratory equipment in relation to black and white photography. Includes basic photographic methods and skills in acquiring, developing, printing and presentation of photographs. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

VCA 161(3) **Course ID: 000207**
Commercial Photography II
Continues the study of the 35mm camera as it relates to commercial art primarily in a studio setting using digital photography. Includes problem solving through assigned projects. Prerequisite: VCA 160 with a grade of "C" or better or consent of instructor. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

VCA 170(3) **Course ID: 000212**
Advertising Design I
Introduces the principles and practices of graphic design. Includes terminology and procedures commonly used in graphic design, along with the Macintosh computer system and software used in illustration and graphic design for the print media and for the Internet, and navigation through and searching for information on the Internet using a web browser. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Computer Literacy, Technical

VCA 171(3) **Course ID: 005395**
Advertising Design II
Explores basic to intermediate skills in electronic publishing, design layout, type composition, and prepress for printing and publishing applications. Prerequisite: VCA 170 with a grade of "C" or better or Consent of Instructor. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

VCA 240(3) **Course ID: 002123**
Package Design
Explores the development of brand identity as it relates to packaging. Introduces concepts, theories, terminology, design, and production of hard and soft wall three-dimensional packaging and product labels. Emphasizes creative problem solving and legal requirements for the packaging industry. Students must receive a letter grade of "C" or better. Prerequisite: VCC 125 and VCC 110. Lecture: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCA 250(3) **Course ID: 004553**
Advertising Design
Explores and reviews the role of advertising in the marketing mix, and the function of major media forms. Uses a creative brief process to research, create, and design promotional concepts that meet assignment specifications. Explores legal strategies involved in advertising. Students must receive a letter grade of "C" or better. Prerequisite:VCC 125 and VCC 110. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCA 251(3) **Course ID: 005384**
Digital Filmmaking III
Provides training in single-person video production with an emphasis on Electronic News Gathering style of video. Covers news, interviews, TV commercials, and documentaries. Prerequisite: VCA 152 with a grade of "C" or better or Consent of Instructor. Pre-requisite Or Co-requisite: VCA 160 with a grade of "C" or better or Consent of Instructor. Lecture: 2 credits (30 contact hours). Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

VCA 252(3) **Course ID: 005385**
Digital Filmmaking IV
Provides training in multiple-person video production with an emphasis on Film-Style video production, story telling, TV commercials, and documentaries. Prerequisite: VCA 251 with a grade of "C" or better or Consent of Instructor. Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

VCA 255(3) **Course ID: 002120**
Corporate Design
Creates and develops a total corporate identity emphasizing relationships between adequate research and development of appropriate concepts for a company image. Students must receive a letter grade of "C " or better. Prerequisite: VCC 125 and VCC 110. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (75 contact hours/37.5:1 ratio).
Components: Lecture
Attributes: Technical

VCA 260(4) **Course ID: 000208**
Commercial Photography III
Continues Commercial Photography II. Applies principles and techniques with emphasis on digital color photographic illustrations captured in the studio and on location. Begins use of lens perspective controls on the camera. Prerequisite: VCA 161 with a grade of "C" or better or consent of instructor. Lecture/Lab: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCA 261(4) **Course ID: 000209**
Commercial Photography IV
Continues Commercial Photography III. Emphasizes color photography and color management. Guidance in portfolio development as well as exploration of business practices in photography. Prerequisite: VCA 260 with a grade of "C" or better or consent of instructor. Lecture/Lab: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCA 270(4) **Course ID: 000214**
Advertising Design III
Emphasizes computer design and layout based on extensive use of the industry standard page layout and drawing programs; and critical thinking for problem solving, preparation, and production of electronic artwork. Prerequisite: VCA 171 with a grade of "C" or greater or Consent of Instructor. Lecture: 2 credits (30 contact hours). Laboratory: 2 credits (60 contact hours/30:1 ratio).
Components: Laboratory, Lecture
Attributes: Technical

VCA 271(4) **Course ID: 000215**
Advertising Design IV
Extends VCA 270 to include creation of a professional portfolio. Prerequisite: VCA 270 with a grade of "C" or greater or Consent of Instructor. Lecture: 2 credits (30 contact hours). Laboratory: 2 credits (60 contact hours/30:1 ratio).
Components: Laboratory, Lecture
Attributes: Technical

VCA 280(3) **Course ID: 002126**
Instructor Consent Required
Professional Portfolio Development
Introduce students to proper assembly of a professional portfolio and presentation skills. Students will refine work created in previous classes, identify strengths and weaknesses in their work, create a self-promotional package, attend mock interviews and participate in portfolio exhibit. Students must receive a letter grade of "C" to successfully complete this course. Prerequisite: Permission of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (75 contact hours/37.5:1 ratio).
Components: Laboratory, Lecture
Attributes: Technical

VCA 290(3) **Course ID: 000205**
Instructor Consent Required
Folio Seminar
Prepares advanced design and photography students to complete a professional portfolio. Explores job interview techniques to help students understand their responsibilities in seeking positions. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours). Prerequisite: Consent of Instructor.
Components: Lecture
Attributes: Technical

VCA 298(2 - 6) **Course ID: 000210**
Practicum
Incorporates and applies skills and techniques previously learned in the classroom and commercial art laboratory. Provides practical experience in a variety of commercial art establishments in the community. Prerequisite: VCA 280, VCA 261 or VCA 271 with a grade of "C" or greater or Consent of Instructor. Lecture: 1 credits (15 contact hours) Lab/Practicum: 3 credits (150 contact hours/50:1 ratio)
Components: Laboratory, Lecture
Attributes: Technical

VCC Visual Communications Core

VCC 100(3) **Course ID: 004455**
Introduction to Visual Communication
Introduces the concepts, vocabulary, and processes used in relation to visual communication. Includes various disciplines such as advertising and design, multimedia, and printing. Identifies career paths and specific job skills within the visual communication field. Students must receive a letter grade of "C" or better. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

VCC 105(3) **Course ID: 004458**
Fundamentals of Typography
Explores the use of type as a major element of design. Students become skilled in selecting appropriate type styles and fonts for a variety of media. Provides experience in using type as a creative tool to produce interesting, type-only designs. Introduces the elements and principles of design. Students must receive a letter grade of "C" or better. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

VCC 106(3) **Course ID: 016769**
Typography
Explores the use of type as a major element of design. Students become skilled in selecting appropriate type styles and fonts for a variety of media. Provides experience in using type as a creative tool to produce interesting, type-only designs. Applies elements and principles of design. Students must receive a final grade of `C' or better to advance in all Visual Communication courses. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCC 110(3) **Course ID: 002111**
Design Concepts
Explores in detail the elements and principles of design to develop skills in producing creative ideas and designs for various media forms. Apply concepts in the process of design that includes legal issues, media strategy, and customer behavior. Students must complete with a final grade of "C" or better to advance in all Visual Communication courses. Pre-requisite Or Co-requisite: VCC 125. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCC 115(3) **Course ID: 005141**
Strategic Concepts
Introduces advertising, promotion, creative and marketing concepts related to the visual communication field. Topics also include legal issues, media strategy, and consumer behavior. Students must receive a letter grade of "C" or better. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

VCC 125(3) **Course ID: 006859**
Computer Graphics I
Introduces students to computer applications that are specific to the visual communication industry. Develops primary skills using software applications for page layout, illustration and digital imaging. Students must complete with a final grade of "C" or better to advance in all Visual Communication courses. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCC 150(3) **Course ID: 004475**
Mac Basics
Provides an introduction to Apple/Mac computer technology. Emphasizes industry specific needs, including hardware and software. Presents basic uses of the Internet, email, file management and computer ethics. This course fulfills the computer/digital literacy requirement. Students must receive a letter grade of "C" or better. Basic keyboarding recommended. Prerequisite: RDG 020. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Digital Literacy

VCC 166(3) **Course ID: 001510**
Photoshop Basics
Develops skills to digitally manipulate, enhance, and create composite photographs. Introduces raster graphics and their use in the visual communication industry. Creation and manipulation of graphics from simple to increasingly complex images and designs will be the focus of this course. Students must receive a letter grade of "C" or better. Prerequisite: Digital Literacy. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCC 200(3) **Course ID: 002124**
Computer Illustration
Develops skills in computer illustration and drawing using industry standard software. Introduces vector graphics and their uses in the visual communication industry. Creation of vector graphics from simple to increasingly complex designs will be the focus of this course. Students must receive a letter grade of "C" or better. Prerequisite: Digital Literacy. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCC 205(3) **Course ID: 004454**
Introduction to HTML
Introduces the creation of Web sites using hypertext markup language (HTML) and cascading style sheets (CSS). Students must receive a letter grade of "C" or better. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

VCC 210(3) **Course ID: 002125**
Advanced Computer Illustration
Provides students with advanced knowledge and skills in computer illustration. Creation of vector graphics and complex designs will be the focus of this course. Students must receive a letter grade of "C" or better. Prerequisite Or Co-requisite: VCC 200. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCC 212(3) **Course ID: 005589**
Vinyl Graphics and Applications
Introduces concepts, vocabulary, and processes used in relation to the design and production of graphics for the sign industry. Provides knowledge in the operation of wide format printers and vinyl cutters/plotters to create special graphics used for indoor and outdoor advertising. Covers the procedures used to prepare vinyl graphics and substrates for different applications. Students must receive a letter grade of "C" or better. Pre-requisite Or Co-requisite: VCC 125. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCC 214(3) **Course ID: 005731**
Production Design I
Introduces concepts, vocabulary, and processes used in relation to the design and production of graphics for various media and promotional materials. Provides students with knowledge and training of various production equipment along with software applications used to design graphics. Students must receive a final grade of "C" or better to advance in all Visual Communication courses. Pre-requisite: VCC 110 & VCC 125. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCC 216(3) **Course ID: 006860**
Production Design II
Introduces students to the technologies of pad printing and screen printing. Provides students with knowledge and training of various equipment and procedures to properly prepare graphics for these printing technologies. Provides students with training in appropriate software applications used to design and prepare graphics or a variety of substrates and promotional items. Students must receive a final grade of "C" or better to advance in all Visual Communication courses. Pre-requisite Or Co-requisite: VCC 110 & VCC 125. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCC 218(3) **Course ID: 006861**
Production Design III
Provides basic knowledge of the steps and procedures used to prepare, troubleshoot, and correct files for digital printing. Provides students with the basic skills to produce and utilize PDF files. Provides knowledge in the importance of proper imposition and page-layout of various publications. Provides knowledge and training of various finishing and binding techniques used in the industry. Students must receive a final grade of "C" or better to Advance in all Visual Communication courses. Pre-requisite: VCC 110 & VCC 125. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCC 220(3) **Course ID: 004473**
Instructor Consent Required
InDesign Basics
Develops skills in page design and layout using Adobe InDesign software. Students will understand apply concepts and mechanics of page layout to produce various publications using graphic design concepts learned. Students must receive a letter grade of "C" or better. Prerequisite: Digital Literacy. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCC 230(3) **Course ID: 004462**
Instructor Consent Required
Advanced InDesign
Provides advanced skills in page design and layout using Adobe InDesign software. Design and creation of a variety of complex and multi-page documents will be the focus of this course. Students must receive a letter grade of "C" or better. Prerequisite: VCC 220. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCC 235(3) **Course ID: 016770**
Graphic Design I
Explores the use of elements and principles of design in the creative ideation process. Uses the creative brief process to research, design, and create corporate identities, packaging, promotional items, and advertising campaigns. Introduce concepts, theories, terminology, and design of corporate logos, packaging, and advertising. Introduces legal requirements within the industry. Students must receive a final grade of `C' or better to advance in all Visual Communication courses. Pre-requisite: VCC 110 & VCC 215. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCC 245(3) **Course ID: 016771**
Graphic Design II
Explores advanced techniques in the creative ideation process to design professional corporate identities, packaging, promotional items, and advertising campaigns. Emphasizes the use of graphics standards for corporate branding. Defines specifications for the design of packaging and product labels. Students must receive a final grade of `C' or better to advance in all Visual Communication courses. Pre-requisite: VCC 235. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCC 255(3) **Course ID: 016772**
Emerging Media Design
Explores fundamental principles of design, function, and usability of new media technology, including games, mobile applications, web-based media and other digital media platforms. Students must receive a final grade of "C" or better to advance in all Visual Communication courses. Pre-requisite: VCC 110 & VCC 125. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCC 260(3) **Course ID: 001509**
Instructor Consent Required
Publication Design
Provides advanced knowledge of designing publications for the print media using a combination of Adobe InDesign, Photoshop and Illustrator. Creation of a variety of complex and multi-page documents will be the focus of this course. Students must receive a letter grade of "C" or better. Prerequisite: VCC 110 and VCC 125. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCC 260(3) **Course ID: 016773**
Computer Graphics II
Provides advanced skills in computer graphics using Adobe InDesign, Photoshop, and Illustrator. Creation of a variety of complex and multi-page documents will be the focus of this course. Students will also gain knowledge in working with PDF files, color separations, preflighting and imposition for printing. Students must receive a final grade of "C" or better to advance in all Visual Communication courses. Pre-requisite: VCC 110 & VCC 125. Lecture/Lab: 3.0 credits (90 contact hours)
Components: Lecture
Attributes: Technical

VCC 266(3) **Course ID: 005142**
Advanced Photoshop
Develops advanced skills to digitally manipulate, enhance, and create composite photographs. Applies advanced principles, concepts, and techniques for graphic design and digital photography. Creation and manipulation of graphics for complex images and designs will be the focus of this course. Students must receive a letter grade of "C" or better. Prerequisite: VCC 166. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCC 270(3) **Course ID: 005798**
Acrobat Basics
Provides students with the basic skills using Adobe Acrobat to produce and utilize PDF documents. Students must receive a letter grade of "C" or better. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

VCC 297(3) **Course ID: 004469**
Instructor Consent Required
Internship
Provides supervised on-the-job work experience related to the students educational objectives. Students participating in Internships do not receive compensation for their work. Co-Op/Internship: 3 credits (180 contact hours). Prerequisite: Permission of Instructor.
Components: Co-Op
Attributes: Technical

VCC 298(3) **Course ID: 004463**
Instructor Consent Required
Practicum
Provides supervised on-the-job work experience related to the student's educational objectives. Student participating in the Practicum do not receive compensation. Practicum/ Internship: 3 credits (180 contact hours). Prerequisite: Permission of Instructor.
Components: Practicum
Attributes: Technical

VCM Visual Communications Multimedia

VCM 110(3) **Course ID: 004453**
Fundamentals of Animation
Explores the fundamentals of 2-D animation through history, theory and practical application. Covers the basic concepts of animation, including: character design and development, character environment, and storyboarding. Students must receive a letter grade of "C" or better. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

VCM 115(3) **Course ID: 004452**
2-D Animation
Introduces basic computer animation using industry standard software. Uses software to create 2-D animations for various multi-media functions. Students must receive a letter grade of "C" or better. Lecture: 1.0 credit (15 contact hours); Laboratory: 2.0 credits (75 contact hours).
Components: Lecture
Attributes: Technical

VCM 125(3) **Course ID: 015851**
Foundations of Video Production
Introduces students to the basics of video production and animation. Includes screenwriting, storyboards, and planning a video production and animation project. Familiarizes students with video, lighting, and sound equipment. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

VCM 140(3) **Course ID: 001762**
Digital Video
Presents techniques for digital audio and video acquisition, equipment, and editing software. Emphasis on planning and creating storyboards for digital video project from conception to final product. Students must receive a letter grade of "C" or better. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCM 210(3) **Course ID: 004344**
3-D Animation
Introduces the principles of animation. Uses commercial 3-D animation packages and storyboards to produce 3-D models and animations. Students must receive a letter grade of "C" or better. Prerequisite Or Co-requisite: VCM 115. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (75 contact hours).
Components: Lecture
Attributes: Technical

VCM 215(3) **Course ID: 005143**
After Effects
Introduces basic compositing techniques and motion graphics using Adobe AfterEffects. Emphasizes an understanding of pre-production for AfterEffects, green screen, lighting, key-framing, creating mattes, animating text, syncing to audio and exporting movies. Students must receive a letter grade of "C" or better. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

VCM 220(3) **Course ID: 001767**
Webpage Design
Introduces students to principles and elements used in web design. Explores basic web design tools such as mark-up languages, cascading style sheet, and web authoring software. Identifies fundamentals including website layout, navigation, font usage, color schemes, and site structure to create visually-pleasing websites. Students must receive a letter grade of "C" or better. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (75 contact hours/37.5:1 ratio).
Components: Laboratory, Lecture
Attributes: Technical

VCM 225(3) **Course ID: 005732**
Advanced 3-D Animation
Familiarizes students with advanced techniques of computer animation. Covers the production of 3-D animations using advanced lighting and rendering tools, inverse kinematics, and dynamic scene elements. Students must receive a letter grade of "C" or better. Pre-requisite Or Co-requisite: VCM 210. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCM 230(3) **Course ID: 004345**
Advanced Webpage Design
Introduces aesthetic, navigational, accessibility, usability, and interactivity issues for web designers. Prerequisite: VCM 220 with a grade of "C" or better or Consent of Instructor. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (75 contact hours).
Components: Laboratory
Attributes: Technical

VCM 240(3) **Course ID: 004456**
Advanced Digital Video
Emphasizes planning and creation of digital video projects through a non-linear editing environment is the focus of this course. Deploys audio/video content through various delivery systems. Students must receive a letter grade of "C" or better. Prerequisite Or Co-requisite: VCM 140. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (75 contact hours/37.5:1 ratio).
Components: Laboratory, Lecture
Attributes: Technical

VCP Visual Communications Printing

VCP 250(3) **Course ID: 005795**
Screen Printing
Includes how to identify and perform the proper methods of the operations of a screen printing process, including registration, placement, screen preparations, artwork preparations, and using inks and substrates to produce quality screen printed products to specification. Students must receive a letter grade of "C" or better. Pre-requisite: VCC 125 and VCC 166. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VCP 255(3) **Course ID: 001508**
Instructor Consent Required
Special Topics Lab
This course provides the student with additional hands-on experience. Topic will be specified by instructor. Laboratory: 3 credits (45 contact hours). Course may be scheduled a maximum of three times, with a total of 9 credit hours/135 clock hours. Prerequisite: Permission of Instructor.
Components: Laboratory
Attributes: Technical

VCP 285(3) **Course ID: 004536**
Instructor Consent Required
Electronic Prepress
This is a capstone course designed to address the multiple applications of a Digital Production Artist in Visual Communication. Prerequisite: Permission of Instructor. Laboratory: 3 credits (90 contact hours/30:1 ratio).
Components: Laboratory
Attributes: Technical

VET Veterinary Technology

VET 110(5) **Course ID: 007425**
Introduction to Veterinary Technology
Introduces students to veterinary medicine and technology through the lecture component covering hospital operation, professional standards, and ethics. Introduces the study of breeds and strains of domesticated animals and the basic concepts of animal behavior. Studies the nature and form of medicines and the calculation of dose and dosages. The lab component teaches and reinforces restraint techniques; lab procedures, equipment identification, medical terminology, and medication administration; and small animal nutrition. Co-requisite: AGR 240; BIO 112; BIO113. Lecture/Lab: 5.0 credits (135 contact hours).
Components: Lecture
Attributes: Technical

VET 112(4) **Course ID: 007426**
Veterinary Microbiology
Examines the characteristics of microorganisms and their relationships to animal health and diseases. Introduces fundamental microbiological principles and laboratory techniques. Pre-requisite: BIO 112, BIO 113, and VET 110. Lecture/Lab: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

VET 114(5) **Course ID: 007427**
Animal Anatomy and Physiology
Provides a functional integration of basic science and clinical information as it relates to animals in an integrated lecture and laboratory approach, employing the organ system approach, using domestic and laboratory animals as models to discuss anatomy and physiology. Utilizes prosected animal specimens, fresh and preserved, as well as skeletons and models, in the laboratory to reinforce course concepts. Pre-requisite: VET 110. Co-requisite: VET 112. Lecture/Lab: 5.0 credits (135 contact hours).
Components: Lecture
Attributes: Technical

VET 120(2) **Course ID: 007428**
Clinical Practicum I
Provides practical experience in veterinary clinics and/or related facilities; students complete an average of approximately 12 hours of clinical practicum per week. Pre-requisite: VET 110, 112, and 114. Co-requisite: VET 130. Clinical: 2.0 credits (96 contact hours).
Components: Clinical
Attributes: Technical

VET 130(5) **Course ID: 007429**
Veterinary Lab Procedures I
Introduces the student to essential nursing skills, covers surgical nursing concepts, small and large animal medical nursing, aseptic technique, and surgical instrumentation. The lab component prepares the student to assist the veterinarian in performing surgery by introducing anesthesia and operation of the anesthesia machine and nursing procedures during the surgical process. Introduces radiographic procedures and covers dental prophylaxis, recognition of dental abnormalities, and charting. Pre-requisite: VET 110, 112, and 114. Co-requisite: VET 120. Lecture/Lab: 5.0 credits (135 contact hours).
Components: Lecture
Attributes: Technical

VET 210(3) **Course ID: 007430**
Pharmacology
Introduces the major drug classifications, covers the use and control of drugs, measurements and conversion factors, and methods of drug action and interaction used in small and large animal practice. Pre-requisite: VET 120 and VET 130. Co-requisite: VET 220 and VET 230. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

VET 220(5) **Course ID: 007431**
Parasitology and Clinical Lab
Covers the study of internal and external parasites of companion, exotic, and farm animals. Life cycles, diagnostic protocol, control, and treatment of the most common parasites will be discussed. Familiarizes students with laboratory techniques performed in veterinary hospitals and clinics. Examination and testing of blood, feces, urine, and exudates are performed for diagnostic and prognostic purposes. Development of skills necessary to maintain a safe laboratory working environment, institute quality control programs, collect, process, store, and transport clinical biological specimens. Pre-requisite: VET 120 and VET 130. Co-requisite: VET 210 and VET 230. Lecture/Lab: 5.0 credits (135 contact hours).
Components: Lecture
Attributes: Technical

VET 230(5) **Course ID: 007432**
Veterinary Lab Procedures II
Covers development, treatment, prevention, and control of infectious and non-infectious diseases. Develops skills in surgical nursing, anesthesia monitoring, critical care, emergency medicine, and radiographic techniques. Pre-requisite: VET 120 and VET 130. Co-requisite: VET 210 and VET 220. Lecture/Lab: 5.0 credits (135 contact hours).
Components: Lecture
Attributes: Technical

VET 240(5) **Course ID: 007433**
Veterinary Lab Procedures III
Emphasizes lab animal care, advanced radiographic techniques, ultrasound, and clinical pathology, this course as a continuation of VET 230. Refine skills introduced in previous courses. Uses field trips to veterinary and research facilities when appropriate. Pre-requisite: VET 210, VET 220, and VET 230. Co-requisite: AGR 280 and VET 250. Lecture/Lab: 5.0 credits (135 contact hours).
Components: Lecture
Attributes: Technical

VET 250(5) **Course ID: 007434**
Clinical Practicum II
Provides practical experience in veterinary hospitals, clinics, and/or related facilities; students complete an average of 16 hours per week. Pre-requisite: VET 210, VET 220, and VET 230. Co-requisite: VET 240. Clinical: 5.0 credits (240 contact hours).
Components: Clinical
Attributes: Technical

VMI Volumetric Medical Imaging

VMI 200(4) **Course ID: 005199**
Sectional Anatomy & Pathology I
The anatomy of the human body will be examined through cross-sectional images from cadavers and CT/MR images. Emphasis will be placed on identifying anatomical landmarks and describing relative anatomical location with appropriate medical terminology. Topics will include: head, neck, spine, thorax, abdomen, pelvis, and upper and lower extremities. Some pathology will be introduced. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (30 contact hours). Prerequisite: BIO 137 and BIO 139.
Components: Laboratory, Lecture
Attributes: Technical

VMI 201(4) **Course ID: 005200**
Sectional Anatomy & Pathology II
Continuation of Sectional Anatomy and Pathology I with an emphasis on pathology. Topics include oncology, orthopedics, angiography, and endoscopy. Case studies utilized to demonstrate anatomical location and identification of normal/pathologic tissue. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (30 contact hours). Prerequisite: VMI 200.
Components: Laboratory, Lecture
Attributes: Technical

VMI 210(4) **Course ID: 005201**
Volumetric Medical Imaging I
Software-based course designed to introduce radiological computer post-processing. Mastery of basic functions enable students to perform reconstruction, segmentation, annotation and analysis of images. Data management and communication will be emphasized throughout the course. Lecture: 1 credit (15 contact hours); Laboratory: 3 credits (90 contact hours). Prerequisite: VMI 200 or concurrent.
Components: Laboratory, Lecture
Attributes: Technical

VMI 211(4) **Course ID: 005202**
Volumetric Medical Imaging II
Continuation of Volumetric Medical Imaging I focusing on case studies and standard protocols. Students will complete an assigned case study and present it in class. Competency in advanced topics will include axial manipulations, animations and monitoring pathology. Health Insurance Portability and Accountability Act (HIPAA) compliancy issues will be addressed. Lecture: 1 credit (15 contact hours); Laboratory: 3 credits (90 contact hours). Prerequisite: VMI 201 or concurrent, VMI 210.
Components: Laboratory, Lecture
Attributes: Technical

WGS Womens Studies

WGS 200(3) **Course ID: 000815**
Introduction to Women's and Gender Studies in the Social Sciences
Introduces women's and gender studies from a social science perspective, using a cross-cultural and interdisciplinary approach. Emphasizes social science explanations for sex-typed behavior, social perceptions of women and men, and the roles of women in social and cultural life. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

WGS 201(3) **Course ID: 000921**
Introduction to Women's and Gender Studies in the Arts and Humanities
Introduces women's and gender studies from a humanities perspective, using a cross-cultural and interdisciplinary approach including art and literature. Examines issues and problems of women in contemporary society through the lens of race, gender, class, and socio-political spheres. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

WLD Welding

WLD 100(2) **Course ID: 004575**
Oxy-Fuel Systems
A working knowledge of oxy-fuel identification, set-up, inspection, and maintenance; consumable identification, selection and care; principles of operation; and effects of variables for manual and mechanized oxy-fuel cutting, welding, brazing principles and practices, and metallurgy. Shop safety and equipment use are also covered. Lecture: 2 credits (30 contact hours) Corequisite: WLD 101 or Consent of Instructor.
Components: Lecture
Attributes: Technical

WLD 101(2) **Course ID: 004576**
Oxy-Fuel Systems Lab
Manipulative skills necessary to weld and cut plate and pipe in all positions, as well as brazing, braze welding, and gouging. Lab: 2 credits (60 contact hours/30:1 ratio) Corequisite: WLD 100 or Consent of Instructor.
Components: Laboratory
Attributes: Technical

WLD 110(2) **Course ID: 004605**
Cutting Processes
A working knowledge of various cutting processes used by the welding industry. Will include, but is not limited to, safety, theory of operation, setup and operating techniques, troubleshooting and making minor equipment repairs, terms and definitions, identification, evaluation, repair and prevention of discontinuities of cut surfaces. Includes oxy-fuel cutting, plasma arc cutting, exothermic cutting, air carbon arc cutting, shielded metal arc cutting, and mechanical cutting process. Lecture: 2 credits (30 contact hours) Corequisite: WLD 111 or Consent of Instructor.
Components: Lecture
Attributes: Technical

WLD 111(3) **Course ID: 004577**
Cutting Processes Lab
Designed to provide the student with practical experience to become proficient in the use of various metal cutting processes. Safety, setup, and operating techniques are employed. Students will troubleshoot and make minor repairs to equipment. Students will also learn to identify, repair, and prevent reoccurrence of cut surface discontinuities. Processes shall include, but not limited to: OFC, PAC, AAC, and mechanical methods. Various materials will be used where appropriate. Lab: 3 credits (90 contact hours/30:1 ratio) Corequisite: WLD 110 or Consent of Instructor.
Components: Laboratory
Attributes: Technical

WLD 120(2) **Course ID: 004600**
Shielded Metal Arc Welding
Teaches students the identification, inspection, and maintenance of SMAW electrodes; principles of SMAW; the effects of variables on the SMAW process to weld plate and pipe; and metallurgy. Lecture: 2 credits (30 contact hours). Corequisite: WLD 121 or Consent of Instructor.
Components: Lecture
Attributes: Technical

WLD 121(3) **Course ID: 004578**
Shielded Metal Arc Welding Fillet Lab
Provides laboratory experiences in which the student acquires the manipulative skills to perform fillet welds in all positions. Lab: 3 credits (90 contact hours/30:1 ratio) Corequisite: WLD 120 or Consent of Instructor.
Components: Laboratory
Attributes: Technical

WLD 123(3) **Course ID: 004599**
Shielded Metal Arc Welding Groove with Backing Lab
Provides experiences in which students acquire the manipulative skills to do groove welds in all positions with backing. Laboratory: 3 credits (90 contact hours/30:1 ratio). Prerequisite: WLD 120 and 121 or Consent of Instructor.
Components: Laboratory
Attributes: Technical

WLD 130(2) **Course ID: 004579**
Gas Tungsten Arc Welding
Identification, inspection, and maintenance of GTAW machines; identification, selection and storage of GTAW electrodes; principles of GTAW; the effects of variables on the GTAW process; and metallurgy. This course also teaches the theory and application of Plasma Arc Cutting. Corequisite: WLD 131 or Consent of Instructor. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

WLD 131(3) **Course ID: 004580**
Gas Tungsten Arc Welding Fillet Lab
Teaches the necessary manipulative skills needed to apply the Gas Tungsten Arc on various joint designs on plate with both ferrous and non-ferrous metals. Plasma Arc cutting included. Corequisite: WLD 130 or Consent of Instructor. Laboratory: 3 credits (90 contact hours/30:1 ratio).
Components: Laboratory
Attributes: Technical

WLD 133(3) **Course ID: 004581**
Gas Tungsten Arc Welding Groove Lab
Teaches the method of operation and application of the gas tungsten arc welding process for welding groove welds in both ferrous and non-ferrous plate in all positions. Prerequisite: WLD 130 or Consent of Instructor. Laboratory: 3 credits (90 contact hours/30:1 ratio).
Components: Laboratory
Attributes: Technical

WLD 140(2) **Course ID: 004582**
Gas Metal Arc Welding
Identification, inspection, and maintenance of GMAW machines; identification, selection, and storage of GMAW electrodes; principles of GMAW; and the effects of variables on the GMAW process. Theory and applications of related processes such as FCAW and SAW and metallurgy are also included. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

WLD 141(3) **Course ID: 004583**
Gas Metal Arc Welding Fillet Lab
Teaches the practical application and manipulative skills of Gas Metal Arc Welding and the proper safety situations needed in this process. Both ferrous and non-ferrous metals will be covered, as well as various joint designs on plate in all positions. Corequisite: WLD 140 or Consent of Instructor. Laboratory: 3 credits (90 contact hours/30:1 ratio).
Components: Laboratory
Attributes: Technical

WLD 143(3) **Course ID: 004584**
Gas Metal Arc Welding Groove Lab
Teaches the method of operation and application of the gas metal arc welding process for welding groove welds in both ferrous and non-ferrous plate in all positions using both short circuiting and spray transfer where appropriate. Prerequisite: WLD 140 or Consent of Instructor. Laboratory: 3 credits (90 contact hours/30:1 ratio).
Components: Laboratory
Attributes: Technical

WLD 145(1) **Course ID: 004586**
Gas Metal Arc Welding Aluminum Lab
Teaches welding aluminum using the GMAW process. Fillets and groove welds are made in all positions in both plate and pipe. Short Circuiting and Spray transfers are used where appropriate. Prerequisite: WLD 140 or Consent of Instructor. Laboratory: 1 credit (30 contact hours/30:1 ratio)
Components: Laboratory
Attributes: Technical

WLD 147(1) **Course ID: 004585**
Flux Cored Arc Welding Lab
Acquaints the student with the method of operation and application of the flux cored welding system. Prerequisite: WLD 140 or Consent of Instructor. Laboratory: 1 credit (30 contact hours/30:1 ratio).
Components: Laboratory
Attributes: Technical

WLD 151(2) **Course ID: 004603**
Basic Welding A
Introduction to welding, cutting processes, and related equipment. Basic setup, operation, and related safety are applied. Lecture: 1 credit (15 contact hours). Laboratory: 1 credit (30 contact hours/30:1 ratio).
Components: Laboratory, Lecture
Attributes: Technical

WLD 152(5) **Course ID: 004441**
Basic Welding B
An introduction to common cutting and welding processes used in industry. Theory, setup, operation, and related safety are applied. Lecture: 2 credits (30 contact hours); Laboratory: 3 credits (90 contact hours/30:1 ratio).
Components: Laboratory, Lecture
Attributes: Technical

WLD 161(1) **Course ID: 004602**
Submerged Arc Welding Lab
Designed to provide the student with a working knowledge of SAW set-up, maintenance, and consumable identification. Includes practice in basic SAW principles and techniques related to the field of study. Laboratory: 1 credit (30 contact hours/30:1 ratio). Prerequisite: WLD 140 or Consent of Instructor.
Components: Laboratory
Attributes: Technical

WLD 170(2) **Course ID: 004587**
Blueprint Reading for Welding
Provides a study of occupationally specific prints for welders. Advanced study of multi-view drawings, assembly drawings, datum dimensions, numerical control drawings, sheet metal prints, castings and forgings, instrumentation and control charts and diagrams, working drawings, geometric dimensioning and tolerancing and use of reference materials and books are included. Occupational specifics including welding drawings, symbols, joint types, grooves, pipe welding symbols, testing symbols and specification interpretations are stressed. Lecture: 2 credits (30 contact hours). Corequisite: WLD 171 or Consent of Instructor.
Components: Lecture
Attributes: Technical

WLD 171(3) **Course ID: 004588**
Blueprint Reading for Welding Lab
Provides students with practice fabricating from a blueprint. Students will read and fabricate from detail prints, control distortion during fabrication, and follow the proper sequence in welding a fabricated part. Students will use welding symbols and study weld sizes and strengths. Lab: 3 credits (90 contact hours/30:1 ratio). Corequisite: WLD 170 or Consent of Instructor.
Components: Laboratory
Attributes: Technical

WLD 198(1 - 6) **Course ID: 004573**
Instructor Consent Required
Special Topics in Welding
Various Welding Technology topics, issues and trends will be addressed. Topics may vary from semester to semester at the discretion of the instructor; course may be repeated with different topics to a maximum of six credit hours. Lecture: Varies. Laboratory: Varies. Prerequisite: Consent of instructor.
Components: Lecture
Attributes: Technical

WLD 220(2) **Course ID: 004589**
Welding Certification
Provides the student with a working knowledge of certification encountered in welding. The student will start with developing a WPS, qualify the WPS, and qualify personnel. Documents used in welding certification are developed and used. Corequisite: WLD 221 or Consent of Instructor. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

WLD 221(3) **Course ID: 004590**
Welding Certification Lab
Provides students an opportunity to test on all types of welding for certification standards. Laboratory: 3 credits (90 contact hours/30:1 ratio). Corequisite: WLD 220 or Consent of Instructor.
Components: Laboratory
Attributes: Technical

WLD 225(3) **Course ID: 004591**
Shielded Metal Arc Welding Open Groove Lab
Designed to build upon SMAW Plate Lab I & II. Offers the student the opportunity to advance skills in the practical aspects of vee-butt plate welding using SMAW. Lab: 3 credits (90 contact hours/30:1 ratio). Prerequisite: WLD 120 and 121 or Consent of Instructor.
Components: Laboratory
Attributes: Technical

WLD 227(3) **Course ID: 004592**
Shielded Metal Arc Welding Pipe Lab A
Teaches the required manipulative skills to arc weld pipe using mild steel electrodes in the 2G and 5G positions including proper pipe preparations, electrodes, safety precautions, and welding sequences. Fillet welds on pipe joints are also included in 2F, 2FR, 4F, and 5F positions. Lab: 3 credits (90 contact hours/30:1 ratio). Prerequisite: WLD 225 or Consent of Instructor.
Components: Laboratory
Attributes: Technical

WLD 229(3) **Course ID: 004593**
Shielded Metal Arc Welding Pipe Lab B
Teaches the required manipulative skills to arc weld pipe using mild steel electrodes in the 6G position including proper pipe preparations, electrodes, safety precautions, and welding sequences. Lab: 3 credits (90 contact hours/30:1 ratio). Prerequisite: WLD 225 or Consent of Instructor.
Components: Laboratory
Attributes: Technical

WLD 235(3) **Course ID: 004594**
Gas Tungsten Arc Welding Pipe Lab A
Teaches the method of operation and application of the gas tungsten arc welding system for welding of both ferrous and non-ferrous pipe in 2G and 5G positions. Lab: 3 credits (90 contact hours/30:1 ratio). Prerequisite: WLD 133 or Consent of Instructor.
Components: Laboratory
Attributes: Technical

WLD 237(3) **Course ID: 004595**
Gas Tungsten Arc Welding Pipe Lab B
Teaches the method of operation and application of the gas tungsten arc welding process for welding of both ferrous and non-ferrous pipe in 6G position. Lab: 3 credits (90 contact hours/30:1 ratio). Prerequisite: WLD 133 or Consent of Instructor.
Components: Laboratory
Attributes: Technical

WLD 239(1) **Course ID: 005310**
Orbital Tube Welding
Familiarizes students with the orbital weld system, basic setup, operation, and safety. Prerequisite: WLD 130 & WLD 131 or Permission of Instructor. Laboratory: 1 credit (30 contact hours).
Components: Laboratory
Attributes: Technical

WLD 240(2) **Course ID: 004596**
Materials Technology
Provides the student with a working knowledge of materials used in welding. This class includes materials identification and classification. Metallurgy is included with a detailed analysis of physical, mechanical, and chemical properties. Introduces the student to the application of metallurgy to welding including preheat, interpass temperature, and post-weld heat treatment and their effects on welding and welding's effect on them. Lecture: 2 credits (30 contact hours)
Components: Lecture
Attributes: Technical

WLD 245(3) **Course ID: 004604**
Gas Metal Arc Welding Pipe Lab A
Acquaints the student with the operation and application of the Gas Metal Arc System for welding pipe in 2G and 5G positions. Laboratory: 3 credits (90 contact hours/30:1 ratio). Corequisite: WLD 143 or Consent of Instructor.
Components: Laboratory
Attributes: Technical

WLD 247(3) **Course ID: 004597**
Gas Metal Arc Welding Pipe Lab B
Acquaints the student with the operation and application of the Gas Metal Arc System for welding groove welds in pipe in 6G position. Lab: 3 credits (90 contact hours/30:1 ratio). Prerequisite: WLD 143 or Consent of Instructor.
Components: Laboratory
Attributes: Technical

WLD 251(1) **Course ID: 004608**
Welding Automation Lab
Provides the student a working knowledge and hands-on experience using automatic welding equipment such as robotic welding systems, bug-o systems, and automated GTA welding systems. Lab: 1 credit (30 contact hours/30:1 ratio).
Components: Laboratory
Attributes: Technical

WLD 253(1) **Course ID: 004607**
Pipe Fitting and Template Development Lab
Provides experiences in pipe template development and job knowledge and experience with the techniques and tools used to field layout, cut, and fit the various pipe joints that are used in pipe trades. Lab: 1 credit (30 contact hours/30:1 ratio).
Components: Laboratory
Attributes: Technical

WLD 298(1 - 6) **Course ID: 004443**
Instructor Consent Required
Welding Practicum
Provides on-the-job work experience related to the student's educational objectives. Students participating in the Practicum do not receive compensation. Laboratory: 1-6 credits (30-180 contact hours/30:1 ratio). Prerequisite: Consent of Instructor.
Components: Practicum
Attributes: Technical

WLD 299(1 - 6) **Course ID: 004598**
Instructor Consent Required
Cooperative Education Program
Provides supervised on-the-job work experience related to the student's educational objectives. Prerequisite: Consent of Instructor.
Components: Co-Op
Attributes: Technical

WMT Wood Manufacturing Technology

WMT 110(2) **Course ID: 002176**
Technical Drawing and Blueprint Reading
Fundamentals of multiview and pictorial drafting techniques; and reading and interpreting architectural, furniture and cabinet drawings are the focus of this course. Students will apply blueprint reading skills by preparing materials and cutting lists for actual jobs.
Components: Lecture
Attributes: Technical

WMT 120(4) **Course ID: 002177**
Wood Product Manufacturing
Fundamentals of wood processing and an overview of the secondary wood processing industry are covered in this course. The nature of wood, material selection, terminology, safe set-up, and operation of common woodworking equipment will be discussed. Each student will fabricate a wood product while being introduced to custom woodworking techniques, as well as mass production concepts related to product engineering.
Components: Lecture
Attributes: Technical

WMT 160(2) **Course ID: 002178**
Wood Finishing
This course is an overview of contemporary spray finishing materials and processes for millwork assemblies. Each student will learn to set-up and troubleshoot a variety of common finishing systems while experimenting with finishing materials and supplies.
Components: Lecture
Attributes: Technical

WMT 198(2 - 4) **Course ID: 002179**
Instructor Consent Required
Practicum
The practicum provides supervised work experience related to the student's educational objective. Students participating in the practicum do not receive compensation. The course may be taken for 2 - 4 credits. Prerequisite: Permission of the Instructor
Components: Practicum
Attributes: Technical

WMT 199(2) **Course ID: 002180**
Instructor Consent Required
Cooperative Education
Co-op provides supervised work experience related to the student's educational objectives. Students participating in the cooperative education program receive compensation for their work. Prerequisite: Permission of the Instructor, Co-Op: 2 credits (150 contact hours).
Components: Co-Op

WMT 230(2) **Course ID: 002184**
Introduction to Panel Processing
An overview of the terminology, materials, processing equipment and related software utilized by panel processing manufacturers of residential and commercial case work. Emphasis will be placed on the design and fabrication of frameless cabinetry to the use of panel saws, edgebanders, CNC boring equipment and case clamp's. Lecture: 2 credits (60 contact hours).
Components: Lecture
Attributes: Technical

WMT 240(4) **Course ID: 002185**
Cabinet Making Technology
This course is an overview of the cabinet and store fixtures industries. Emphasis will be placed on the design and construction of face frame as well as frameless (32mm) systems. Each student will plan and build a vanity, kitchen cabinet or store fixture which utilizes contemporary casework techniques. Prerequisite: WMT 110 and WMT 120. Lecture: 4 credits (120 contact hours).
Components: Lecture

WMT 250(4) **Course ID: 002186**
Furniture Technology
Furniture design principles, structural considerations, joinery, fasteners, veneering, and use of specialized machines for complex operations are the focus of this course. Each student will plan and build a piece of furniture which includes at least one drawer, a door and some veneering. Prerequisite: WMT 110 and WMT 120. Lecture: 4 credits (120 contact hours).
Components: Lecture

WMT 260(4) **Course ID: 002187**
Millwork Technology
Design of moulding, doors, and door frames; windows; stairs; and mantels are the focus of this course. Emphasis will be placed on construction principles, joinery, and fasteners for millwork assemblies. Each student will build one or more millwork items. Prerequisite: WMT 110 and WMT 120. Lecture: 4 credits (120 contact hours).
Components: Lecture

WMT 270(2) **Course ID: 002188**
Moulder/Grinder Operation
This course is an introduction to the setup, operation, and maintenance of moulding and grinding equipment. The student will use tools, measuring devices and visual inspection techniques to insure quality to customer specifications. Students will set up and operate a moulder or plane, shape and groove woodstock. Students will read work tickets and examine the pattern shape to determine moulder setup procedure and type of woodstock to be cut. Prerequisite: Permission of the Instructor. Lecture: 2 credits (60 contact hours).
Components: Lecture
Attributes: Technical

WMT 280(2) **Course ID: 002189**
Instructor Consent Required
Estimating
This course is an introduction to estimating costs and materials for wood products. Special emphasis will be placed on projecting material and labor costs for custom wood products as well as mass produced items. Prerequisite: Permission of the Instructor. Lecture: 2 credits (60 contact hours).
Components: Lecture

WMT 290(4) **Course ID: 002190**
Instructor Consent Required
Advanced Wood Processing
This course is a capstone experience for advanced wood processing technicians involving the integration of computer aided design and world-class manufacturing of wood products. Prerequisite: Permission of the Instructor. Lecture: 4 credits (120 contact hours).
Components: Lecture

WPP Workplace Principles

WPP 200(3) **Course ID: 002193**
Workplace Principles
Workplace Principles examines the changing workforce and the skills needed to adapt to constantly changing demands and expectations. The course includes but is not limited to problem solving, teamwork, time management, and self-management skills. Job-seeking and job-retention skills are taught through the development of resumes and job search materials. Maximum benefit is received if this course is taken in the latter part of the student's course work. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

WPP 2001(1) **Course ID: 016787**
Soft Skills
Workplace Principles examines the changing workforce and the skills needed to adapt to constantly changing demands and expectations. The course includes but is not limited to problem solving, teamwork, time management, and self-management skills. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

WPP 2002(1) **Course ID: 016788**
Job Search
Workplace Principles examines the changing workforce and the skills needed to adapt to constantly changing demands and expectations. The course includes but is not limited job-seeking and job-retention skills. Job-seeking and job-retention skills are taught through the development of resumes and job search materials. Maximum benefit is received if this course is taken in the latter part of the student's course work. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

WPP 2003(1) **Course ID: 016789**
Employment Preparation
Workplace Principles examines the changing workforce and the skills needed to adapt to constantly changing demands and expectations. The course includes but is not limited to job-seeking and job-retention skills. Job-seeking skills are taught through the development of resumes and job search materials. Maximum benefit is received if this course is taken in the latter part of the student's course work. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

ZOO Zoo Technology

ZOO 293(3 - 6) **Course ID:005347**
Applied Experiences in Zoo Technology
Provides experience working in a fully accredited zoological park and exposure to zookeeping with many facets of animal husbandry. Practicum: 3 - 6 credits (180-360 contact hours).
Components: Practicum
Attributes: Technical

Determination of Residency Status for Admission and Tuition Purposes

13 KAR 2:045.

RELATES TO: KRS Chapter 13B, 164.020, 164.030, 164A.330(6)

STATUTORY AUTHORITY: KRS 164.020(8)

NECESSITY, FUNCTION, AND CONFORMITY: KRS 164.020(8) requires the Council on Postsecondary Education to determine tuition and approve the minimum qualifications for admission to a state postsecondary education institution and authorizes the Council to set different tuition amounts for residents of Kentucky and for nonresidents. This administrative regulation establishes the procedure and guidelines for determining the residency status of a student who is seeking admission to, or who is enrolled at, a state-supported postsecondary education institution.

Section 1 Definitions

(1) "Academic term" means a division of the school year during which a course of studies is offered, and includes a semester, quarter, or single consolidated summer term as defined by the institution.

(2) "Continuous enrollment" means enrollment in a state-supported postsecondary education institution at the same degree level for consecutive terms, excluding summer term, since the beginning of the period for which continuous enrollment is claimed unless a sequence of continuous enrollment is broken due to extenuating circumstances beyond the student's control, including serious personal illness or injury, or illness or death of a parent.

(3) "Degree level" means enrollment in a course or program that could result in the award of a:

(a) Certificate, diploma, or other program award at an institution;

(b) Baccalaureate degree or lower, including enrollment in a course by a nondegree-seeking postbaccalaureate student;

(c) Graduate degree or graduate certification other than a first-professional degree in law, medicine, dentistry, or "Pharm.D"; or

(d) Professional degree in law, medicine, dentistry, or "Pharm. D".

(4) "Dependent person" means a person who cannot demonstrate financial independence from parents or persons other than a spouse and who does not meet the criteria for independence established in Section 5 of this administrative regulation.

(5) "Determination of residency status" means the decision of a postsecondary education institution that may include a formal hearing that results in the classification of a person as a Kentucky resident or as a nonresident for admission and tuition assessment purposes.

(6) "Domicile" means a person's true, fixed, and permanent home and is the place where the person intends to remain indefinitely, and to which the person expects to return if absent without intending to establish a new domicile elsewhere.

(7) "Full-time employment" means continuous employment for at least forty-eight (48) weeks at an average of at least thirty (30) hours per week.

(8) "Independent person" means a person who demonstrates financial independence from parents or persons other than a spouse and who meets the criteria for independence established in Section 5 of this administrative regulation.

(9) "Institution" means an entity defined by KRS 164.001(12) if the type of institution is not expressly stated and includes the Kentucky Virtual University, the Council on Postsecondary Education, and the Kentucky Higher Education Assistance Authority.

(10) "Kentucky resident" means a person determined by an institution for tuition purpose to be domiciled in and a resident of Kentucky as determined by this administrative regulation.

(11) "Nonresident" means a person who:

(a) Is domiciled outside by Kentucky;

(b) Currently maintains legal residence outside Kentucky; or

(c) Is not a Kentucky resident as determined by this administrative regulation.

(12) "Parent" means one (1) of the following:

(a) A person's father or mother; or

(b) A court-appointed legal guardian if:

1. The guardianship is recognized by an appropriate court within the United States;

2. There was a relinquishment of the rights of the parents; and

3. The guardianship was not established primarily to confer Kentucky residency on the person.

(13) "Preponderance of the evidence" means the greater weight of evidence or evidence that is more credible and convincing to the mind.

(14) "Residence" means the place of abode of a person and the place where the person is physically present most of the time for a noneducational purpose in accordance with Section 3 of this administrative regulation.

(16) "Student financial aid" means all forms of payments to a student if one (1) condition of receiving the payment is the enrollment of the student at an institution, and includes student employment by the institution or a graduate assistantship.

(17) "Sustenance" means living expenses including room, board, maintenance, transportation, and educational expenses including tuition, fees, books, and supplies.

Section 2 Scope

(1) State-supported postsecondary education institutions were established and are maintained by the Commonwealth of Kentucky primarily for the benefit of qualified residents of Kentucky. The substantial commitment of public resources to postsecondary education is predicated on the proposition that the state benefits significantly from the existence of an educated citizenry. As a matter of policy, access to postsecondary education shall be provided so far as feasible at reasonable cost to a qualified individual who is domiciled in Kentucky and who is a resident of Kentucky.

(2) The Council on Postsecondary Education may require a student who is neither domiciled in nor a resident of Kentucky to meet higher admission standards and to pay a higher level of tuition than resident students.

(3) This administrative regulation shall apply to all student residency determinations regardless of circumstances, including residency determinations made by the state-supported institutions for prospective and currently-enrolled students; the Southern Regional Education Board for contract spaces; reciprocity agreements, if appropriate; the Kentucky Virtual University; academic common market programs; the Kentucky Educational Excellence Scholarship Program; and other state student financial aid programs, as appropriate.

Section 3 Determination of Residency Status; General Rules

(1) A determination of residency shall include:

(a) An initial determination of residency status by an institution during the admission process or upon enrollment in an institution for a specific academic term or for admission into a specific academic program;

(b) A reconsideration of a determination of residency status by an institution based upon a changed circumstance; or

(c) A formal hearing conducted by an institution upon request of a student after other administrative procedures have been completed.

(2) An initial determination of residency status shall be based upon:

(a) The facts in existence when the credentials established by an institution for admission for a specific academic term have been received and during the period of review by the institution;

(b) Information derived from admissions materials;

(c) If applicable, other materials required by an institution and consistent with this administrative regulation; and

(d) Other information available to the institution from any source.

(3) An individual seeking a determination of Kentucky residency status shall demonstrate that status by a preponderance of the evidence.

(4) A determination of residency status shall be based upon verifiable circumstances or actions.

(5) Evidence and information cited as the basis for Kentucky domicile and residency shall accompany the application for a determination of residency status.

(6) A student classified as a nonresident shall retain that status until the student is officially reclassified by an institution.

(7) A student may apply for a review of a determination of residency status once for each academic term.

(8) If an institution has information that a student's residency status may be incorrect, the institution shall review and determine the student's correct residency status.

(9) If the Council on Postsecondary Education has information that an institution's determination of residency status for a student may be incorrect, it may require the institution to review the circumstances and report the results of that review.

(10) An institution shall impose a penalty or sanction against a student who gives incorrect or misleading information to an institutional official, including payment of nonresident tuition for each academic term for which resident tuition was assessed based on an improper determination of residency status. The penalty or sanction may also include:

(a) Student discipline by the institution through a policy written and disseminated to students; or

(b) Criminal prosecution.

Section 4 Presumptions Regarding Residency Status

(1) In making a determination of residency status, it shall be presumed that a person is a nonresident if:

(a) A person is, or seeks to be, an undergraduate student and admissions records show the student to be a graduate of an out-of-state high school within five (5) years prior to a request for a determination of residency status;

(b) A person's admissions records indicate the student's residence to be outside of Kentucky at the time of application for admission;

(c) A person moves to Kentucky primarily for the purpose of enrollment in an institution;

(d) A person moves to Kentucky and within twelve (12) months enrolls at an institution more than half time;

(e) A person has a continuous absence of one (1) year from Kentucky; or

(f) A person attended an out-of-state higher education institution during the past academic year and paid in-state tuition at that institution.

(2) A presumption arising from subsection (1) of this section shall only be overcome by preponderance of evidence sufficient to demonstrate that a person is domiciled in and is a resident of Kentucky.

Section 5 Determination of Whether a Student is Dependent or Independent.

(1) In a determination of residency status, an institution shall first determine whether a student is dependent or independent. This provision is predicated on the assumption that a dependent person lacks the financial ability to live independently of the person upon whom the student is dependent and therefore lacks the ability to form the requisite intent to establish domicile. A determination that a student is independent shall be one (1) step in the overall determination of whether a student is or is not a resident of Kentucky.

(2) In determining the dependent or independent status of a person, the following information shall be considered as well as other relevant information available at the time the determination is made:

(a)1. Whether the person has been claimed as a dependent on the federal or state tax returns of a parent or other person for the year preceding the date of application for a determination of residency status; or

2. Whether the person is no longer claimed by a parent or other person as a dependent or as an exemption for federal and state tax purposes; and

(b) Whether the person has financial earnings and resources independent of a person other than an independent spouse necessary to provide for the person's own sustenance.

(3) An individual who enrolls at an institution immediately following graduation from high school and remains enrolled shall be presumed to be a dependent person unless the contrary is evident from the information submitted.

(4) Domicile may be inferred from the student's permanent address, parent's mailing address, or location of high school of graduation.

(5) Marriage to an independent person domiciled in and who is a resident of Kentucky shall be a factor considered by an institution in determining whether a student is dependent or independent.

(6) Financial assistance from or a loan made by a parent or family member other than an independent spouse, if used for sustenance of the student:

(a) Shall not be considered in establishing a student as independent; and

(b) Shall be a factor in establishing that a student is dependent.

Section 6 Effect of a Determination of Dependent Status on a Determination of Residency Status

(1) The effect of a determination that a person is dependent shall be:

(a) The domicile and residency of a dependent person shall be the same as either parent. The domicile and residency of the parent shall be determined in the same manner as the domicile and residency of an independent person; and

(b) The domicile and residency of a dependent person whose parents are divorced, separated, or otherwise living apart shall be Kentucky if either parent is domiciled in and is a resident of Kentucky regardless of which parent has legal custody or is entitled to claim that person as a dependent pursuant to federal or Kentucky income tax provisions.

(2) If the parent or parents of a dependent person are Kentucky residents and are domiciled in Kentucky but subsequently move from the state:

(a) The dependent person shall be considered a resident of Kentucky while in continuous enrollment at the degree level in which currently enrolled; and

(b) The dependent person's residency status shall be reassured if continuous enrollment is broken or the current degree level is completed.

Section 7 Member of Armed Forces of the United States, Spouse and Dependents; Effect on a Determination of Residency Status

(1) A member, spouse, or dependent of a member whose domicile and residency was Kentucky at the time of induction into the Armed Forces of the United States, and who maintains Kentucky as home of record and permanent address, shall be entitled to Kentucky residency status:

(a) During the member's time of active service; or

(b) If the member returns to this state within six (6) months of the date of the member's discharge from active duty.

(2)(a) A member of the armed services on active duty for more than thirty (30) days and who has a permanent duty station in Kentucky shall be classified as a Kentucky resident and shall be entitled to in-state tuition as shall the spouse or a dependent child of the member.

(b) A member, spouse, or dependent of a member shall not lose Kentucky residency status if the member is transferred on military orders while the member, spouse, or dependent requesting the status is in continuous enrollment at the degree level in which currently enrolled.

(3)(a) Membership in the National Guard or civilian employment at a military base alone shall not qualify a person for Kentucky residency status under the provisions of subsections (1) and (2) of this section. If a member of the Kentucky National Guard is on active duty status for a period of not less than thirty (30) days, the member shall be considered a Kentucky resident, as shall the spouse of a dependent child of the member.

(4) A person's residency status established pursuant to this section shall be reassessed if the qualifying condition is terminated.

Section 8 Status of Nonresident Aliens; Visas and Immigration

(1)(a) A person holding a permanent residency visa or classified as a political refugee shall establish domicile and residency in the same manner as another person.

(b) Time spent in Kentucky and progress made in fulfilling the conditions of domicile and residency prior to obtaining permanent residency status shall be considered in establishing Kentucky domicile and residency.

(2) A person holding a nonimmigrant visa with designation A, E, G, H-1, H-4 if accompanying a person with an H-1 visa, I, K, L, N, R, shall establish domicile and residency the same as another person.

(3)(a) An independent person holding a nonimmigrant visa with designation B, C, D, F, H-2, H-3, H-4 if accompanying a person with an H-2 or H-3 visa, J, M, O, P, Q, S, TD, or TN shall not be classified as a Kentucky resident, because that person does not have the capacity to remain in Kentucky indefinitely and therefore cannot form the requisite intent necessary to establish domicile as defined in Section 1(6) of this administrative regulation.

(b) A dependent person holding a visa as described in paragraph (a) of this subsection, but who is a dependent of a parent holding a visa as described in subsection (2) of this section, shall be considered as holding the visa of the parent.

(c) A dependent person holding a visa described in subsection (2) of this section or paragraph (a) of this subsection, if a parent is a citizen of the United States and is a resident of and domiciled in Kentucky, shall be a resident of Kentucky for the purposes of this administrative regulation.

(4) A person shall be a Kentucky resident for the purpose of this administrative regulation if the person graduated from a Kentucky high school and:

(a) Is an undocumented alien;

(b) Holds a visa listed in subsections (2) or (3)(a) of this section; or

(c) Is a dependent of a person who holds a visa listed in subsections (2) or (3)(a) of this section.

(5)(a) Except as provided in paragraph (b) of this subsection, a person who has petitioned the federal government to reclassify visa status shall continue to be ineligible until the petition has been decided by the federal government.

(b) A person who has petitioned the federal government to reclassify his or her visa status based on marriage to a Kentucky resident and who can demonstrate that the petition has been filed and acknowledged by the federal government, may establish Kentucky domicile and residency at that time.

Section 9 Beneficiaries of a Kentucky Educational Savings Plan Trust

A beneficiary of a Kentucky Educational Savings Plan Trust shall be granted residency status if the beneficiary meets the requirements of KRS 164A.330(6).

Section 10 Criteria Used in a Determination of Residency Status

(1)(a) A determination of Kentucky domicile and residency shall be based upon verifiable circumstances or actions.

(b) A single fact shall not be paramount, and each situation shall be evaluated to identify those facts essential to the determination of domicile and residency.

(c) A person shall not be determined to be a Kentucky resident by the performance of an act that is incidental to fulfilling an educational purpose or by an act performed as a matter of convenience.

(d) Mere physical presence in Kentucky, including living with a relative or friend, shall not be sufficient evidence of domicile and residency.

(e) A student or prospective student shall respond to all requests for information regarding domicile or residency requested by an institution.

(2) The following facts, although not conclusive, shall have probative value in their entirety and shall be individually weighted, appropriate to the facts and circumstances in each determination of residency:

(a) Acceptance of an offer of full-time employment or transfer to an employer in Kentucky or contiguous area while maintaining residence and domicile in Kentucky;

(b) Continuous physical presence in Kentucky while in a nonstudent status for the twelve (12) months immediately preceding the start of the academic term for which a classification of Kentucky residency is sought;

(c)1. Filing a Kentucky resident income tax return for the calendar year preceding the date of application for a change in residency status; or

2. Payment of Kentucky withholding taxes while employed during the calendar year for which a change in classification is sought;

(d) Full-time employment of at least one (1) year while living in Kentucky;

(e) Attendance as a full-time, nonresident student at an out-of-state institution based on a determination by that school that the person is a resident of Kentucky;

(f) Abandonment of a former domicile or residence and establishing domicile and residency in Kentucky with application to or attendance at an institution following and incidental to the change in domicile and residency;

(g) Obtaining licensing or certification for a professional and occupational purpose in Kentucky;

(h) Payment of real property taxes in Kentucky;

(i) Ownership of real property in Kentucky, if the property was used by the student as a residence preceding the date of application for a determination of residency status;

(j) Marriage of an independent student to a person who was domiciled in and a resident of Kentucky prior to the marriage; and

(k) The extent to which a student is dependent on student financial aid in order to provide basic sustenance.

(3) Except as provided in subsection (4) of this section, the following facts, because of the ease and convenience in completing them, shall have limited probative value in a determination that a person is domiciled in and is a resident of Kentucky:

(a) Kentucky automobile registration;

(b) Kentucky driver's license;

(c) Registration as a Kentucky voter;

(d) Long-term lease of at least twelve (12) consecutive months of noncollegiate housing; and

(e) Continued presence in Kentucky during academic breaks.

(4) The absence of a fact contained in subsection (3) of this section shall have significant probative value in determining that a student is not domiciled in or is not a resident of Kentucky.

Section 11 Effect of a Change in Circumstances on Residency Status

(1) If a person becomes independent or if the residency status of a parent or parents of a dependent person changes, an institution shall reassess residency either upon a request by the student or a review initiated by the institution.

(2) Upon transfer to a Kentucky institution, a student's residency status shall be assessed by the receiving institution.

(3) A reconsideration of a determination of residency status for a dependent person shall be subject to the provisions for continuous enrollment, if applicable.

Section 12 Student Responsibilities

(1) A student shall report under the proper residency classification, which includes the following actions:

(a) Raising a question concerning residency classification;

(b) Making application for change of residency classification with the designated office or person at the institution; and

(c) Notifying the designated office or person at the institution immediately upon a change in residency.

(2) If a student fails to notify an institutional official of a change in residency, an institutional official may investigate and evaluate the student's residency status.

(3)(a) If a student fails to provide, by the date specified by the institution, information required by an institution in a determination of residency status, the student shall be notified by the institution that the review has been canceled and that a determination has been made.

(b) Notification shall be made by registered mail, return receipt requested.

(c) Notification shall be made within ten (10) calendar days after the deadline for receipt of materials has passed.

(4)(a) The formal hearing conducted by an institution and the final recommended order shall be a final administrative action with no appeal to the Council on Postsecondary Education.

(b) A formal administrative hearing conducted by the Council on Postsecondary Education for residency determinations related to eligibility for the Academic Common Market and Regional Contract Programs shall be conducted pursuant to the provisions of KRS Chapter 13B and 13 KAR 2:070. The recommended order issued by the President of the Council shall be a final administrative action.

(5) A student shall not be entitled to appeal a determination of residency status if the determination made by an institution is because a student has failed to meet published deadlines for the submission of information as set forth in subsection (3) of this section. A student may request a review of a determination of residency status in a subsequent academic term.

Section 13 Institutional Responsibilities Each institution shall:

(1) Provide for an administrative appeals process that includes a residency appeals officer to consider student appeals of an initial residency determination and which shall include a provision of fourteen (14) days for the student to appeal the residency appeals officer's determination;

(2) Establish a residency review committee to consider appeals of residency determinations by the residency appeals officer. The residency review committee shall make a determination of student residency status and notify the student in writing within forty-five (45) days after receipt of the student appeal;

(3) Establish a formal hearing process as described in Section 14 of this administrative regulation; and

(4) Establish written policies and procedures for administering the responsibilities established in subsections (1), (2), and (3) of this section and that are:

(a) Approved by the institution's governing board;

(b) Made available to all students; and

(c) Filed with the council.

Section 14 Formal Institutional Hearing

(1) A student who appeals a determination of residency by a residency review committee shall be granted a formal hearing by an institution if the request is made by a student in writing within fourteen (14) calendar days after notification of a determination by a residency review committee.

(2) If a request for a formal hearing is received, an institution shall appoint a hearing officer to conduct a formal hearing. The hearing officer shall:

(a) Be a person not involved in determinations of residency at an institution except for formal hearings; and

(b) Not be an employee in the same organizational unit as the residency appeals officer.

(3) An institution shall have written procedures for the conduct of a formal hearing that have been adopted by the board of trustees or regents, as appropriate, and that provide for:

(a) A hearing officer to make a recommendation on a residency appeal;

(b) Guarantees of due process to a student that include:

1. The right of a student to be represented by legal counsel; and

2. The right of a student to present information and to present testimony and information in support of a claim of Kentucky residency; and

(c) A recommendation to be issued by the hearing officer.

(4) An institution's formal hearing procedures shall be filed with the Council on Postsecondary Education and shall be available to a student requesting a formal hearing.

Section 15 Cost of Formal Hearings

(1) An institution shall pay the cost for all residency determinations including the cost of a formal hearing.

(2) A student shall pay for the cost of all legal representation in support of the student's claim of residency.

(17 Ky.R. 2557; eff. 4-5-1991; Am. 22 Ky.R. 1656; 1988; eff. 5-16-1996; 23 Ky.R. 3380; 3797; 4099; eff. 6-16-1997; 24 Ky.R. 2136; 2705; 25 Ky.R. 51; eff. 7-13-1998; 25 Ky.R. 2177; 2577; 2827; eff. 6-7-1999; 749; 1238; eff. 11-12-2002; 36 Ky.R. 1083; 1951; 2033-M; eff. 4-2-2010.)

Appendix B

Math Course Transitions

Crosswalk – Mathematics

New Courses		Old Courses	
	Dropped	MA 109	College Algebra
MAT 159	Analytical Geometry and Trigonometry	MA 110	Analytical Geometry and Trigonometry
	Dropped	MA 111	Contemporary Mathematics
MAT 154	Trigonometry	MA 112	Trigonometry
MAT 174	Calculus I	MA 113	Calculus I
MAT 184	Calculus II	MA 114	Calculus II
	Dropped	MA 123	Elementary Calculus
	Dropped	MA 162	Finite Mathematics and its Applications
	Dropped	MA 193	Supplementary Mathematics Workshop I: (Topic)
	Dropped	MA 194	Supplementary Mathematics Workshop II: (Topic)
	Dropped	MA 201	Mathematics for Elementary Teachers
	Dropped	MA 202	Mathematical Problem Solving for Elementary Teachers
	Dropped	MA 213	Calculus III
	Dropped	MA 214	Calculus IV
	Dropped	MA 241	Geometry for Middle School Teachers
	Dropped	MAH 155	Applied Mathematics
	Dropped	MAT 115	Mathematics for Middle & Elementary Teachers I
	Dropped	MAT 121	Mathematics for Business
	Dropped	MAT 125	Technical Mathematics
	Dropped	MAT 215	Mathematics for Middle & Elementary Teachers II
	Dropped	MATH 109	Technical Mathematics
	Dropped	MATH 151	Mathematics for Elementary Education I
	Dropped	MATH 152	Mathematics for Elementary Education II
	Dropped	MATH 211	Mathematics for Elementary Teachers I
	Dropped	MATH 212	Mathematics for Elementary Teachers II
	Dropped	STA 200	Statistics: A Force in Human Judgment
	Dropped	STA 291	Statistical Methods
MAT 100	College Algebra Workshop	MT 100	College Algebra Workshop
MAT 105	Business Mathematics	MT 105	Business Mathematics
MAT 110	Applied Mathematics	MT 110	Applied Mathematics
MAT 1101	Logic and Reasoning	MT 1101	Logic and Reasoning
MAT 1102	Statistics	MT 1102	Statistics
MAT 1103	Algebra and Graphing	MT 1103	Algebra and Graphing
MAT 1104	Consumer Math, Geometry and Measurement	MT 1104	Consumer Math, Geometry and Measurement
MAT 116	Technical Mathematics	MT 115	Technical Mathematics
MAT 126	Technical Algebra and Trigonometry	MT 125	Technical Algebra and Trigonometry
	Dropped	MT 139	Instructor Consent Required AAS Mathematics: (Topic)
MAT 146	Contemporary College Mathematics	MT 145	Contemporary College Mathematics
MAT 150	College Algebra	MT 150	College Algebra and Functions
MAT 155	Trigonometry	MT 155	Trigonometry
MAT 160	Precalculus	MT 160	Precalculus
MAT 165	Finite Mathematics and its Applications	MT 165	Finite Mathematics and its Applications
MAT 170	Brief Calculus with Applications	MT 170	Brief Calculus with Applications
MAT 175	Calculus I	MT 175	Calculus I
MAT 185	Calculus II	MT 185	Calculus II
MAT 205	Mathematics For Elementary and Middle School Teachers I	MT 205	Mathematics For Elementary and Middle School Teachers I
MAT 206	Mathematics For Elementary and Middle School Teachers II	MAT 206	Mathematics For Elementary and Middle School Teachers II
MAT 261	Introduction to Number Theory	MT 261	Introduction to Number Theory
MAT 275	Calculus III	MT 275	Calculus III
MAT 285	Differential Equations	MT 285	Differential Equations
STA 210	Statistics: A Force in Human Judgment	ST 290	Statistics: A Force in Human Judgment
STA 220	Statistics	ST 291	Statistical Methods

Historical Mathematics Course Transitions

Below is a table clarifying the math course transition that took place Fall 2004. Courses with the MT prefix that are below the 100-level are transitional courses. MT courses between 100 and 139 are specifically designed for occupational/technical programs. Courses numbered 140 and above are designed as transfer courses.

New Course	Credit	Prereq. Course	Replaces
MT 050 Dev. Math Workshop	1-2	None	MAH 065, MTH 199
MT 055 Pre-Algebra	3	None	MAH 060, MTH 100
MT 065 Basic Algebra w/Measurement	3	MT 055	MAH 070, MTH 110,
MT 075 Pre-College Geometry	3	MT 055	MAH 075
MT 100 College Algebra Workshop	2	MAH 100	
MT 105 Business Math.	3	MT 065	MAH 121
MT 110 Applied Math.	3	MT 065	MAH 151
MT 115 Technical Math.	3	MT 065	MAH 125, MTH 120, MTH 130, MTH 150
MT 120 Intermediate Algebra w/Applications	3	MT 065	MAH 083, MA 108, MTH 160
MT 122 Intermediate Algebra: A Functional Approach	4	MT 065	MAH 080
MT 125 Technical Algebra.& Trigonometry	3	MT 065	MTH 170, MTH 175, MTH 101
MT 139 AAS Mathematics Application: (Topic)	1-3		
MT 145 Contemporary College Mathematics	3	MT 120 or MT 122	MT 107
MT 150 College Algebra	3	MT 120 or MT 122 or MT 125	MT 109
MT 155 Trigonometry	3	MT 120 or MT 122 or MT 125	
MT 190 Mathematics Workshop	1 – 2		

Mathematics Crosswalk of Courses for Purpose of Pre-requisites

MA 110 – Analytical Geometry and Trigonometry	4	MT 160 – Pre-calculus	5
MA 162 – Finite Mathematics and Its Applications	3	MT 165 – Finite Mathematics and Its Applications	3
MA 123 – Elementary Calculus	3	MT 170 – Brief Calculus with Applications	3
MA 113 – Calculus I	4	MT 175 – Calculus I	5
MA 114 – Calculus II	4	MT 185 – Calculus II	5
MA 213 – Calculus III	4	MT 275 – Calculus III	4
MA 214 – Calculus IV	3	MT 285 – Differential Equations	3

Appendix C

Biology Crosswalk

This table includes changes made to Biology courses effective Fall 2010.

	New Course #	Old Course #	Course Title
Transitional Biology Courses	BIO 026	BSL 025	Orientation to College Biology
General Education Biology Courses	BIO 112	BIO 103	Basic Ideas of Biology
	BIO 113	BIO 111	Introduction to Biology Lab
	BIO 114	BSL 102	Biology I
	BIO 115	BSL 100	Biology Laboratory I
	BIO 116	BSL 103	Biology II
	BIO 117	BSL 101	Biology Laboratory II
	BIO 118	----------	Microbes and Society
	BIO 220	BIO 204	The Genetic Perspective
	Dropped	BSL 214	Medical Microbiology
	Dropped	BSL 244	Principles of Environmental Science
	Dropped	PGY 206	Elementary Physiology
Ecology Courses	BIO 120	BIO 102	Human Ecology
	BIO 121	-	Introduction to Ecology Laboratory
	BIO 122	BSL 116	Introduction to Conservation Ecology
	BIO 124	BSL 120	Principles of Ecology
Anatomy and Physiology Courses	BIO 130	BSL 109	Aspects of Human Biology
	BIO 135	BSL 107	Basic Anatomy and Physiology w/ Lab
	BIO 137	BSL 110	Human Anatomy and Physiology I
	BIO 139	BSL 111	Human Anatomy and Physiology II
Organismal Biology Courses	BIO 140	BIO 106/BSL 140	Botany
	BIO 141	BIO 106/BSL 140 and BIO 107	Botany with Laboratory
	BIO 142	BIO 104/BSL 160	Zoology
	BIO 143	BIO 104/BSL 160 and BIO 105	Zoology with Laboratory
Biology Majors Courses (No Changes)	BIO 150	BIO 150	Principles of Biology I
	BIO 151	BIO 151	Principles of Biology Laboratory I
	BIO 152	BIO 152	Principles of Biology II
	BIO 153	BIO 153	Principles of Biology Laboratory II
Molecular and Microbiology Courses	BIO 220	BIO 204	The Genetic Perspective
	Dropped	BSL 214	Medical Microbiology
	Dropped	BSL 244	Principles of Environmental Science
	Dropped	PGY 206	Elementary Physiology
	BIO 224	BSL 215	Introduction to Molecular and Cell Biology
	BIO 225	BSL 212	Medical Microbiology w/ Lab
	BIO 226	BIO 208	Principles of Microbiology
	BIO 227	BIO 208/209	Principles of Microbiology with Laboratory
Selected/Special Topics	BIO 295	BSL 295	Independent Investigation in Biology
	BIO 299	BSL 299	Selected Topics in Biology: Topic

Appendix D

Crosswalk for Chemistry Courses

Approved Course Prefix/ Number		Approved Course Title Implementation Fall 2009	Old Course Prefix/Number		"OLD" Course Title
DEACTIVATED			CHE	115	General Chemistry Laboratory
CHE	120	The Joy of Chemistry*	CHM	101	Chemistry: A Cultural Approach
CHE	125	The Joy of Chemistry Laboratory*	NEW		
CHE	130	Introductory General and Biological Chemistry*	CHM	100	Introductory General and Biological Chemistry
CHE	140	Introductory General Chemistry*	CHE	104	Introductory General Chemistry
CHE	145	Introductory General Chemistry Laboratory*	CHM	104	Introductory General Chemistry Laboratory
CHE	150	Introduction to Organic and Biological Chemistry*	CHE	106	Introduction to Inorganic, Organic, and Biochemistry
CHE	155	Introduction to Organic and Biological Chemistry Laboratory*	NEW		
CHE	160	Preparation for General College Chemistry	CHM	102	Preparation for General College Chemistry
CHE	170	General College Chemistry I*	CHE	105	General College Chemistry I
CHE	173	General College Chemistry I Workshop	NEW		
CHE	175	General College Chemistry Laboratory I*	CHM	105	General Chemistry Laboratory I
CHE	180	General College Chemistry II*	CHE	107	General College Chemistry II
CHE	183	General College Chemistry II Workshop	NEW		
CHE	185	General College Chemistry Laboratory II*	CHM	107	General Chemistry Laboratory II
CHE	220	Analytical Chemistry*	CHE	226	Analytical Chemistry
CHE	270	Organic Chemistry I*	CHE	230	Organic Chemistry I
CHE	275	Organic Chemistry Laboratory I*	CHE	231	Organic Chemistry Laboratory I
CHE	280	Organic Chemistry II*	CHE	232	Organic Chemistry II
CHE	285	Organic Chemistry Laboratory II*	CHE	233	Organic Chemistry Laboratory II
CHE	290	Selected Topics in Chemistry: (Topic)	NEW		
CHE	295	Selected Topics in Chemistry Laboratory: (Topic)	NEW		
CHE	299	Laboratory Research in Chemistry: (Topic)	NEW		
DEACTIVATED			CHEM	175	Applied General and Organic Chemistry

*General Education Status

Agricultural Technology : 2011-2012

New Courses			Old Courses	
AGR 125	Introduction to Fertilizers and Soils		AG 125	Introduction to Fertilizers and Soils
AGR 130	Field Applications in Agriculture		AG 130	Field Applications in Agriculture
AGR 140	Issues in Agriculture		AG 140	Issues in Agriculture
AGR 150	Agriculture Power		AG 150	Agriculture Power
AGR 165	Agriculture Seminar		AG 160	Agriculture Seminar
AGR 170	Introduction to Equipment, Machines, and Engines		AG 170	Introduction to Equipment, Machines, and Engines
AGR 180	Agriculture Internship I		AG 180	Agriculture Internship I
AGR 190	Agriculture Internship II		AG 190	Agriculture Internship II
AGR 200	Agriculture Internship III		AG 200	Agriculture Internship III
AGR 220	Computers in the Agriculture Environment		AG 220	Computers in the Agriculture Environment
AGR 230	Career Development in Agriculture		AG 230	Career Development in Agriculture
AGR 240	Introduction to Animal Science		AG 240	Introduction to Animal Science
AGR 250	Introduction to Plants/Crop Production		AG 250	Introduction to Plants/Crop Production

Art: 2010-2011

New Courses			Old Courses	
AAD 100	Introduction to Arts Administration			Same
	Dropped		AE 272	Workshop in Art Education
ART 100	Introduction to Art			Same
ART 104	Introduction to African Art		AH 104	Introduction to African Art
ART 105	Ancient through Medieval Art History		AH 105	Ancient through Medieval Art
ART 106	Renaissance Through Modern Art History		AH 106	Renaissance Through Modern Art
ART 112	2-Dimensional Design		ART 120	2-Dimensional Design
ART 113	3-Dimensional Design		ART 130	3-Dimensional Design
ART 201	Ancient Art History		AH 210	Ancient Art History
ART 202	Medieval Art		AH 211	Medieval Art
ART 203	Renaissance Art		AH 212	Renaissance Art
ART 204	Modern Art		AH 213	Modern Art
ART 208	Introduction to Art Education		AE 270	Introduction to Art Education

ART 211	Life Drawing		ART 200	Life Drawing
ART 221	Painting II		ART 230	Painting II
ART 240	Ceramics			Same
ART 241	Ceramics II		ART 250	Ceramics II
	Dropped		AS 102	Visual Exploration I
	Dropped		AS 103	Visual Exploration II
	Dropped		AS 215	Studio II
	Dropped		ATS 299	Art Studio Topics: (Topic)
	Dropped		GE 170	Art Appreciation

Biotechnology: 2011-2012

New Courses			**Old Courses**	
BTN 101	Introduction to Biotechnology		BT 101	Introduction to Biotechnology
BTN 110	Nucleic Acid Methods		BT 110	Nucleic Acid Methods
BTN 201	Biotechnology Techniques I		BT 201	Biotechnology Techniques I
BTN 202	Biotechnology Techniques II		BT 202	Biotechnology Techniques II
BTN 210	Cell Culture and Function		BT 210	Cell Culture and Function
BTN 220	Immunological Methods		BT 220	Immunological Methods

Business Administration Systems: 2011-2012

New Courses			**Old Courses**	
	Dropped		B&E 100	Introduction to Business and Economics
BAS 120	Personal Finance		BA 120	Personal Finance
	Dropped		BA 151	Introduction to Electronic Commerce
	Dropped		BA 152	Introduction to Web Design
	Dropped		BA 153	Intermediate Web Page Design
BAS 155	Personal Selling		BA 155	Personal Selling
BAS 160	Introduction to Business		BA 160	Introduction to Business
BAS 170	Entrepreneurship		BA 170	Entrepreneurship
	Dropped		BA 196	Introduction to Food Management Practicum
BAS 200	Small Business Management		BA 200	Small Business Management
BAS 212	Introduction to Financial Management		BA 212	Introduction to Financial Management
BAS 250	Business Employability Seminar		BA 250	Business Employability Seminar
BAS 256	International Business		BA 256	International Business

BAS 260	Professional Development and Protocol		BA 260	Professional Development and Protocol
BAS 267	Introduction to Business Law		BA 267	Introduction to Business Law
BAS 274	Human Resources Management		BA 274	Human Resources Management
BAS 280	Business Internship		BA 280	Business Internship
BAS 282	Principles of Marketing		BA 282	Principles of Marketing
BAS 283	Principles of Management		BA 283	Principles of Management
BAS 284	Applied Management Skills		BA 284	Applied Management Skills
BAS 285	Problems in Marketing and Management		BA 285	Problems in Marketing and Management
BAS 287	Supervisory Management		BA 287	Supervisory Management
BAS 288	Personal and Organizational Leadership		BA 288	Personal and Organizational Leadership
BAS 290	Management, Ethics, and Society		BA 290	Management, Ethics, and Society
BAS 289	Operations Management		BA 289	Operations Management
BAS 291	Retail Management		BA 291	Retail Management
BAS 293	Principles of Finance		BA 293	Principles of Finance
BAS 294	Money and Financial Institutions		BA 294	Money and Financial Institutions
BAS 295	International Finance		BA 295	International Finance
BAS 299	Selected Topics in Business Administration: (Topic)		BA 299	Selected Topics in Business Administration: (Topic)
HOS 100	Introduction to Hospitality Management		HM 100	Introduction to Hospitality Management
HOS 160	Security for the Hospitality Industry		HM 160	Security for the Hospitality Industry
HOS 200	Cultural Heritage Tourism		HM 200	Cultural Heritage Tourism
HOS 210	Front Office Operations		HM 210	Front Office Operations
HOS 282	Tourism Marketing		HM 282	Tourism Marketing

Collision Repair Technology : 2011-2012

New Courses			**Old Courses**	
CRT 100	Introduction to Collision Repair		ABR 100	Introduction to Auto Body Repair
CRT 130	Non-Structural Analysis and Damage Repair		ABR 130	Non-Structural Analysis and Damage Repair
CRT 131	Non-Structural Analysis and Damage Repair Lab		ABR 131	Non-Structural Analysis and Damage Repair Lab
CRT 150	Painting and Refinishing		ABR 150	Painting and Refinishing
CRT 151	Painting and Refinishing Lab		ABR 151	Painting and Refinishing Lab
CRT 198	Practicum		ABR 198	Practicum
CRT 199	Cooperative Education		ABR 199	Cooperative Education
	Dropped		ABR 200	Plastics and Adhesives

CRT 230	Structural Analysis and Damage Repair		ABR 230	Structural Analysis and Damage Repair
CRT 231	Structural Analysis and Damage Repair Lab		ABR 231	Structural Analysis and Damage Repair Lab
CRT 250	Mechanical and Electrical Components		ABR 250	Mechanical and Electrical Components
CRT 251	Mechanical and Electrical Components Lab		ABR 251	Mechanical and Electrical Components Lab
CRT 291	Special Projects I		ABR 291	Special Projects I
CRT 293	Special Projects II		ABR 293	Special Projects II
CRT 295	Special Projects III		ABR 295	Special Projects III
CRT 298	Advanced Practicum		ABR 298	Practicum
CRT 299	Advanced Cooperative Education		ABR 299	Cooperative Education

Computer Aided Drafting & Design : 2011-2012

New Courses			**Old Courses**	
CAD 102	Drafting Fundamentals		DFT 102	Drafting Fundamentals
CAD 108	Introduction to Surveying		DFT 108	Introduction to Surveying
CAD 112	Engineering Graphics		DFT 112	Engineering Graphics
CAD 120	Introduction to Architecture		ADFT 130	Introduction to Architecture
CAD 130	Descriptive Geometry		DFT 130	Descriptive Geometry
CAD 201	Parametric Modeling		CAD 201	Advanced 3-D Modeling
CAD 212	Industrial Drafting Processes		DFT 212	Industrial Drafting Processes
CAD 220	Architectural Design		ADFT 240	Architectural Design
CAD 222	Mechanical Design		DFT 222	Mechanical Design
CAD 230	Construction Techniques		ADFT 230	Construction Techniques
CAD 240	Advanced Dimensioning and Measurement		DFT 240	Advanced Dimensioning and Measurement
CAD 252	Commercial Detailing		ADFT 252	Commercial Detailing
CAD 262	Working Drawings		ADFT 262	Working Drawings
CAD 291	Special Problems		DFT 291	Special Problems
CAD 292	Industrial Applications		DFT 292	Industrial Applications
CAD 293	Special Problems		DFT 293	Special Problems
CAD 298	Practicum		DFT 298	Practicum
CAD 299	Cooperative Education		DFT 299	Cooperative Education

Computer and Information Technologies: 2012-2013

(Previously listed under Computer Information Technology/Information Technology/ Computer Information Systems Technology)

New Courses			Courses that are equivalent to New Courses	Courses requiring program coordinator approval for substitution.
CIT 103	Computer Fundamentals		CIT 103	No Change
CIT 105	Introduction to Computers		CIS 100/CIT 105	
CIT 111	Computer Hardware and Software		IT 105 & IT 205/ CIT 111	
CIT 120	Computational Thinking		CIS 120/CIT 120	
CIT 125	Introduction to GIS			New –Comparable to IT 160
CIT 130	Productivity Software		CIS 130/CIT 130	
CIT 140	JavaScript I		NIS 152/CIT 140	
CIT 141	PHP I			New – Comparable to IT 141
CIT 142	C++ I		CIS 155	
CIT 145	PERL I		NIS 150	
CIT 147	Programming I: Language			New
CIT 148	Visual Basic I		CIS 148/CIT 148	
CIT 149	Java I		CIS 149/CIT 149	
CIT 150	Internet Technologies		CIT 150	
CIT 155	Web Page Development			New – Comparable to IT 132
CIT 157	Web Site Design and Production		IT 130	
CIT 160	Introduction to Networking Concepts		NIS 160/CIS 210	
CIT 161	Network Fundamentals		IT 120/CIT 160	
CIT 162	Home and Small Office Networks		IT 121	
CIT 163	Small-Medium Business or ISP		IT 123	
CIT 164	Introduction to Routing and Switching		IT 223	
CIT 165	Network Design and Support		IT 225	
CIT 170	Database Design Fundamentals		IT 170/ CIT 170/CIS 270	
CIT 171	SQL I		IT 147/CIS 147/CIT 171	
CIT 180	Security Fundamentals		IT 250/CIT 180	
CIT 182	Perimeter Defense			New – Comparable to IT 254
CIT 184	Attacks and Exploits			New – Comparable to IT 252
CIT 210	Routing Protocols and Concepts		IT 122	New - Comparable to CIT 281
CIT 211	LAN Switching and Wireless		IT 220/CIT 282	

CIT 212	Accessing the WAN		IT 222/CIT 283	
CIT 213	MS Client/Server Config		CIT 213	New- Comparable to NIS 211 and NIS 213
CIT 214	Infrastructure Admin		NIS 214	
CIT 217	UNIX/Linux Administration		CIT 217/NIS 230	No Change
CIT 218	UNIX/Linux Net Infrastructure		CIT 218	No Change
CIT 219	Internet Protocols		CIT 269	
CIT 221	Computer Graphics			New Course
CIT 223	Computer Animation			New Course
CIT 225	GIS Software Tools			New - Comparable to IT 260
CIT 229	Selected Topics in GIS			New - Comparable to IT 268
CIT 232	Help Desk Operations		IT 237	
CIT 234	Advanced Productivity Software		CIS 230	
CIT 236	Advanced Data Organization Software		CIS 230/CIT 234 & 236	
CIT 241	PHP II			New – Comparable to IT 241
CIT 242	C++ II		CIS 252	
CIT 246	2-D Game Development: Language			New – Comparable to CIS 250 or CIS 255
CIT 247	Programming II: Language			New Course
CIT 248	Visual Basic II		CIS 248/CIT 248	
CIT 249	Java II		CIS 249/CIT 249	
CIT 253	Data-Driven Web Pages: Topic		IT 235/CIT 253	
CIT 255	Web Server Administration		NIS 275/CIT 255	
CIT 257	Applied Internet Technologies			New – Comparable to IT 291 or IT 295
CIT 258	Internet Technologies Seminar		CIT 294	
CIT 260	Network Installation and Troubleshooting		CIT 260/NIS 270	No Change
CIT 261	MS Active Directory Services		CIT 261/NIS 216	No Change
CIT 262	MS Network Infrastructure		CIT 262	No Change
CIT 264	Microsoft Server Administration		CIT 264	Comparable to NIS 242 or NIS 244 or NIS 245
CIT 265	MA Application Servers		CIT 265	No Change
CIT 266	MS Enterprise Administration		CIT 266	Comparable to NIS 242 or NIS 244 or NIS 245
CIT 271	SQL II		CIT 271	No Change
CIT 276	3-D Game Development: Language			New – Comparable to CIS 260 or CIS 265
CIT 277	Programming III: Language			New Course
CIT 278	Visual Basic III			New – Comparable to CIS 258

CIT 284	Computer Forensics		IT 255	
CIT 285	MS Windows OS Security		IT 258	
CIT 286	UNIX/Linux OS Security			New Course
CIT 287	Cisco OS Security			New Course
CIT 288	Network Security		CIT 289	
CIT 290	Internship		CIT 290/CIS 280	No Change
CIT 291	CIT Capstone		CIS 220/CIT 291/ CIS 200/ CIS 280/ IT 291/ IT 295	
CIT 295	Independent Problems in CIT: Topic		CIT 295	No Change
CIT 299	Special Topics in CIT: Topic		CIT 299	No Change

Computerized Manufacturing and Machining: 2012-2013

(Previously listed under Machine Tool Technology)

New Courses			**Old Courses**	
CMM 110	Fundamentals of Machine Tools - A		MTT 110	Fundamentals of Machine Tools - A
CMM 112	Fundamentals of Machine Tools - B		MTT 112	Fundamentals of Machine Tools - B
CMM 114	Fundamentals of Machine Tools		MTT 114	Fundamentals of Machine Tools
CMM 118	Metrology/Control Charts		MTT 118	Metrology/Control Charts
CMM 120	Applied Machining I		MTT 120	Applied Machining I
CMM 122	Applied Machining II		MTT 122	Applied Machining II
CMM 124	Applied Machining		MTT 124	Applied Machining
CMM 130	Manual Progamming		MTT 130	Manual Programming
CMM 132	CAD/CAM/CNC		MTT 132	CAD/CAM/CNC
CMM 134	Manual Programming CAD/CAM/CNC		MTT 134	Manual Programming CAD/CAM/CNC
CMM 138	Intro to Programming & CNC Machines		MTT 138	Intro to Programming & CNC Machines
CMM 150	Shop Theory		MTT 150	Shop Theory
CMM 151	Machinery's Handbook and Metallurgy		MTT 151	Machinery's Handbook and Metallurgy
CMM 152	Jigs, Fixtures and Gaging		MTT 152	Jigs, Fixtures and Gaging
CMM 153	Mold Theory		MTT 153	Mold Theory
CMM 154	Die Theory		MTT 154	Die Theory
CMM 155	Jigs, Fixtures and Gaging Lab		MTT 155	Jigs, Fixtures and Gaging Lab
CMM 160	Basic Bench and Machine Processes		MTT 160	Basic Bench and Machine Processes
CMM 168	Special Topics in Computerized Manufacturing & Machining		MTT 168	Special Topics in Machine Tool Technology

CMM 169	Special Topics in Computerized Manufacturing & Machining		MTT 169	Special Topics in Machine Tool Technology
CMM 210	Industrial Machining I		MTT 210	Industrial Machining I
CMM 212	Industrial Machining II		MTT 212	Industrial Machining II
CMM 214	Industrial Machining		MTT 214	Industrial Machining
CMM 218	Advanced Machining Techniques for Manufacturing		MTT 218	Advanced Machining Techniques for Manufacturing
CMM 220	Advanced Industrial Machining I		MTT 220	Advanced Industrial Machining I
CMM 220	Advanced Industrial Machining II		MTT 222	Advanced Industrial Machining II
CMM 224	Advanced Industrial Machining		MTT 224	Advanced Industrial Machining
CMM 230	Conversational Programming		MTT 230	Conversational Programming
CMM 234	CNC Machines & Coding Practices		MTT 234	CNC Machines & Coding Practices
CMM 240	Introduction to 3-D Programming		MTT 240	Introduction to 3-D Programming
CMM 244	Advance Programming/Setup Practices		MTT 244	Advance Programming/Setup Practices
CMM 298	Practicum		MTT 298	Practicum
CMM 299	Cooperative Education Program		MTT 299	Cooperative Education Program

Cosmetology: 2011-2012

New Courses			**Old Courses**	
COS 105	Esthetician I		COSE 110	Esthetician I
	Dropped		COS 122	Cosmetology I
	Dropped		COS 124	Cosmetology II
	Dropped		COS 126	Cosmetology III
COS 135	Individual Requirements I		COS 135	Special Problems I
COS 205	Esthetician II		COSE 210	Esthetician II
	Dropped		COS 228	Cosmetology IV
	Dropped		COS 230	Advanced Cosmetology I
	Dropped		COS 232	Advanced Cosmetology II
COS 235	Individual Requirements II		COS 235	Special Problems II
COS 275	Esthetician III		COSE 270	Esthetician III

Criminal Justice : 2011-2012

New Courses			**Old Courses**	
CRJ 100	Introduction to Criminal Justice		CJ 101	Introduction to Criminal Justice
CRJ 102	Introduction to Corrections		CJ 102	Introduction to Corrections

CRJ 218	Police Supervision		CJ 105	Police Supervision
CRJ 107	Introduction to Firearms		CJ 107	Introduction to Firearms
CRJ 110	Principles of Asset Protection		CJ 110	Principles of Asset Protection
CRJ 201	Introduction to Criminalistics		CJ 201	Introduction to Criminalistics
CRJ 202	Issues and Ethics in Criminal Justice		CJ 202	Issues and Ethics in Criminal Justice
CRJ 203	Community Corrections: Probation and Parole		CJ 203	Community Corrections: Probation and Parole
CRJ 204	Criminal Investigations		CJ 204	Criminal Investigations
CRJ 208	Delinquency and the Juvenile Justice System		CJ 208	Delinquency and the Juvenile Justice System
CRJ 210	Physical Security Technology & Systems		CJ 210	Physical Security Technology & Systems
CRJ 211	Liability and Legal Issues		CJ 211	Liability and Legal Issues
CRJ 215	Introduction to Law Enforcement		CJ 215	Introduction to Law Enforcement
CRJ 216	Criminal Law		CJ 216	Criminal Law
CRJ 217	Criminal Procedures		CJ 217	Criminal Procedures
CRJ 220	Introduction to Computer Forensics for Criminal Justice		CJ 220	Introduction to Computer Forensics for Criminal Justice
CRJ 222	Prison & Jail Administration		CJ 222	Prison & Jail Administration
CRJ 230	Criminal Justice Courtroom Procedures		CJ 230	Criminal Justice Courtroom Procedures
CRJ 231	Legal Aspects of Corrections		CJ 231	Legal Aspects of Corrections
CRJ 240	Introduction to Corporate & Industrial Security		CJ 240	Introduction to Corporate & Industrial Security
CRJ 245	Introduction to Business and Industrial Fraud		CJ 245	Introduction to Business and Industrial Fraud
CRJ 279	Terrorism and Political Violence		CJ 279	Terrorism and Political Violence
CRJ 290	Internship in Criminal Justice		CJ 290	Internship in Criminal Justice
CRJ 299	Selected Topics in Law Enforcement		CJ 299	Selected Topics in Law Enforcement

Dental Assisting/Dental Hygiene: 2011-2012

New Courses			**Old Courses**	
DAH 124	Materials in Dentistry		DAH 224	Materials in Dentistry
	Dropped		DAH 111	Preventive Dentistry

Dental Hygiene (BCTC): 2011-2012

New Courses			**Old Courses**	
DHP 120	Dental Hygiene I		DH 120	Dental Hygiene I
DHP 121	Oral Biology I		DH 121	Oral Biology I
DHP 130	Dental Hygiene II		DH 130	Dental Hygiene II

DHP 131	Oral Biology II		DH 131	Oral Biology II
DHP 135	Dental Radiology		DH 135	Dental Radiology
DHP 136	Periodontics I		DH 136	Periodontics for the Dental Hygienist I
DHP 220	Dental Hygiene III		DH 220	Dental Hygiene III
DHP 222	Special Needs Patients		DH 222	Special Needs Patients
DHP 224	Dental Materials		DH 224	Dental Materials
DHP 226	Periodontics II		DH 226	Periodontics for the Dental Hygienist II
DHP 229	Local Anesthesia		DH 229	Local Anesthesia
DHP 230	Dental Hygiene IV		DH 230	Dental Hygiene IV
DHP 235	Principles of Practice		DH 235	Principles of Practice
DHP 238	Community Dental Health		DH 238	Community Dental Health
DHP 299	Independent Study Dental Hygiene		DH 299	Independent Study Dental Hygiene

Diagnostic Medical Sonography: 2011-2012

New Courses			**Old Courses**	
DMS 105	Introduction to Cardiology		SONO 105	Introduction to Cardiology
DMS 109	Sonography I		SONO 110	Sonography I
DMS 111	Abdominal Synography		SONO 111	Abdominal Synography
DMS 115	Sonography II		SONO 115	Sonography II
DMS 116	OB/GYN Sonography		SONO 116	OB/GYN Sonography
DMS 117	Vascular Sonography I		SONO 117	Vascular Sonography I
DMS 118	Vascular Sonography II		SONO 118	Vascular Sonography II
DMS 119	Ultrasonic Physics and Instrumentation		SONO 120	Ultrasonic Physics and Instrumentation
DMS 121	Sonography Physics and Instrumentation		SONO 121	Sonography Physics and Instrumentation
DMS 126	Clinical Education I		SONO 125	Clinical Education I
DMS 136	Vascular Clinical Education I		SONO 136	Vascular Clinical Education I
DMS 145	Cardiac Sonography I		SONO 145	Cardiac Sonography I
DMS 199	Online Physics Review		SONO 200	Online Physics Review
DMS 201	Online Abdomen Review		SONO 201	Online Abdomen Review
DMS 202	Online OB/GYN Review		SONO 202	Online OB/GYN Review
	Dropped		SONO 203	Online High Resolution Sonography
DMS 204	Online Vascular Sonography		SONO 204	Online Vascular Sonography
DMS 205	Cardiac Sonography II		SONO 205	Cardiac Sonography II
DMS 206	Online Vascular Sonography III		SONO 206	Online Vascular Sonography III

DMS 215	Cardiac Sonography III		SONO 215	Cardiac Sonography III
DMS 217	Basic Cardiac Ultrasound Sonography		SONO 217	Basic Cardiac Ultrasound Sonography
DMS 230	Clinical Education II		SONO 230	Clinical Education II
DMS 236	Vascular Clinical Education II		SONO 236	Vascular Clinical Education II
DMS 237	Vascular Clinical Education III		SONO 237	Vascular Clinical Education III
DMS 240	Clinical Education III		SONO 240	Clinical Education III
DMS 245	Cardiac Sonography IV		SONO 245	Cardiac Sonography IV
DMS 255	Vascular Technology		SONO 255	Vascular Technology
DMS 260	Vascular Clinical Education		SONO 260	Vascular Clinical Education
DMS 280	Basic Vascular Technology		SONO 280	Basic Vascular Technology

Digital Game and Simulation Design: 2012-2013

(Previously listed under Digital Game Design)

New Courses			**Old Courses**	
DGD 132	Introduction to 3D Graphics		IT 131	Introduction to Digital 3-D Game Graphics
DGD 232	3D Character Development		IT 232	3-D Digital Game Character Development
DGD 234	3D Animation		IT 231	3-D Digital Game Animation

Education: 2011-2012

New Courses			**Old Courses**	
EDU 110	Orientation to Education		ED 101	Orientation to Education
EDU 120	Child & Adolescent Development		ED 102	Child & Adolescent Development
EDU 130	Introduction to Special Education		ED 103	Introduction to Special Education
EDU 140	Introduction to Behavioral Management		ED 104	Introduction to Behavioral Management
EDU 150	Practical Experiences for the Paraeducator		ED 105	Practical Experiences for the Paraeducator
EDU 201	Introduction to American Education		ED 201	Introduction to American Education
EDU 204	Technology in the Classroom		ED 203	Technology in the Classroom
EDU 240	Elementary & Middle School Literature		ED 240	Elementary & Middle School Literature
EDU 270	Elementary School Literature		ED 270	Elementary School Literature
EDU 280	Education Externship/Co-op		ED 280	Education Externship/Co-op
EDU 299	Selected Topics in Education		ED 299	Selected Topics in Education

Education: 2013-2014

New Courses			Old Courses	
EDM 270	Teaching and Learning in the Middle Grades		MID 270	Teaching and Learning in the Middle Grades

Emergency Medical Services – Paramedic: 2013-2014

New Courses			Old Courses	
	Dropped		PAR 110	Introduction to Paramedic Practice
	Dropped		PAR 120	Paramedic Practice II
	Dropped		PAR 220	Paramedic Practice III
	Dropped		PAR 230	Clinical Practicum I
	Dropped		PAR 2301	Clinical Practicum I-A
	Dropped		PAR 2302	Clinical Practicum I-B
	Dropped		PAR 240	Field Internship I
	Dropped		PAR 2401	Field Internship I -A
	Dropped		PAR 2402	Field Internship I -B
EMS 200	Introduction to Paramedicine - NEW			
EMS 210	Emergency Pharmacology - NEW			
EMS 211	Fundamentals Lab - NEW			
EMS 215	Clinical Experience I - NEW			
EMS 220	Cardiovascular Emergencies - NEW			
EMS 221	Cardiac and Trauma Lab - NEW			
EMS 225	Clinical Experience II - NEW			
EMS 230	Traumatic Emergencies - NEW			
EMS 231	Medical Lab - NEW			
EMS 235	Clinical Experience III - NEW			
EMS 240	Medical Emergencies I - NEW			
EMS 250	Medical Emergencies II - NEW			
EMS 260	Special Populations - NEW			
EMS 270	EMS Operations - NEW			
EMS 275	Seminar in Advanced Life Support (ALS) - NEW			
EMS 285	Field Internship & Summation - NEW			

Energy Systems: 2011-2012

New Courses			Old Courses	
ESP 101	Introduction to Energy Systems		ES 101	Introduction to Energy Systems
ESP 110	Petroleum Based Fuels		ES 110	Introduction to Petroleum Based Fuels
ESP 120	Power Plant Chemistry		ES 120	Power Plant Chemistry
ESP 130	Electrical Concepts		ES 130	Electrical Concepts
ESP 132	Electrical Machinery and Controls		ES 132	Electrical Machinery and Controls
ESP 211	Power Plant Operations I		ES 211	Power Plant Operations I: Introduction to Power Plant Operations
ESP 212	Power Plant Operations II		ES 212	Power Plant Operations II: Boilers/Fuel/Air Combustion/Emissions
ESP 213	Power Plant Operations III		ES 213	Power Plant Operations III: Water/Steam/Turbines/Generators
ESP 214	Power Plant Operations IV		ES 214	Power Plant Operations IV: Auxiliaries
ESP 220	Power Plant Thermodynamics		ES 220	Power Plant Thermodynamic Applications
ESP 280	Capstone in Energy Systems		ES 280	Capstone in Energy Systems

Engineering & Electronics Technology (Previously MIT: Engineering Technology) : 2011-2012

New Courses			Old Courses	
ELT 102	Blueprint Reading		ET 102	Blueprint Reading
ELT 105	Computer Maintenance Essentials		ENGT 105	Computer Maintenance Essentials
ELT 106	Mechanical Engineering Graphics		ET 106	Mechanical Engineering Graphics II
ELT 107	Computer Applications for Technicians		ET 107	Computer Applications for Technicians
ELT 110	Circuits I		ENGT 110	Circuits I
ELT 114	Circuits II		ENGT 114	Circuits II
ELT 118	Computer Numerical Control		ET 118	Manufacturing III, Computer Numerical Control
ELT 120	Digital I		ENGT 120	Digital I
ELT 122	Mechanical Power Transmissions Systems		ET 122	Mechanical Power Transmissions Systems
ELT 124	Mechanical Power Transmission Systems Lab		ET 124	Mechanical Power Transmission Systems Lab
ELT 201	Statics and Strength of Materials		ET 201	Statics and Strength of Materials
ELT 205	Advanced Computer Maintenance		ENGT 205	Advanced Computer Maintenance
ELT 208	Thermodynamic Applications		ET 210	Thermodynamic Applications
ELT 210	Devices I		ENGT 210	Devices I
ELT 214	Devices II		ENGT 214	Devices II
ELT 220	Digital II		ENGT 220	Digital II

ELT 222	Mechanics of Telephony		ENGT 222	Mechanics of Telephony
ELT 224	Basic Telecommunications Installation and Maintenance		ENGT 224	Basic Telecommunications Installation and Maintenance
ELT 226	Safety in the Workplace		ENGT 226	Safety in the Workplace
ELT 232	Computer Software Maintenance		ET 232	Computer Software Maintenance
ELT 234	Computer Hardware Maintenance		ET 234	Computer Hardware Maintenance
ELT 240	Communications Electronics		ENGT 250	Communications Electronics
ELT 243	Electric Power Distribution		ET 243	Electric Power Distribution
ELT 244	Electrical Machinery and Controls		ET 244	Electrical Machinery and Controls
ELT 250	Programmable Logic Controllers		ET 250	Programmable Logic Controllers
ELT 256	Microprocessor Fundamentals		ET 256	Microprocessor Fundamentals
ELT 260	Robotic and Industrial Automation		ENGT 260	Robotic and Industrial Automation
ELT 261	Instrumentation and Measurements		ET 261	Instrumentation and Measurements
ELT 262	Measurement and Instrumentation		ET 262	Measurement and Instrumentation
ELT 264	Mechanical Design		ET 264	Mechanical Design
ELT 265	Applied Fluid Power		ET 265	Applied Fluid Power
ELT 290	Selected Topics in Engineering Technology: (Topic)		ET 290	Selected Topics in Engineering Technology: (Topic)
ELT 295	Independent Problems		ET 295	Independent Problems

Engineering and Electronics Technology: 2012-2013

New Courses			**Old Courses**	
ELT 103	Introduction to Engineering		ET 103	Introduction to Engineering

Foreign Language: 2010-2011

New Courses			**Old Courses**	
FRE 101	Elementary French I		FR 101	Elementary French
FRE 102	Elementary French II		FR 102	Elementary French II
FRE 201	Intermediate French I		FR 201	Intermediate French I
FRE 202	Intermediate French II		FR 202	Intermediate French II
GER 101	Elementary German I		GER 101	Basic German
GER 102	Elementary German II		GER 102	Basic German
GER 201	Intermediate German I		GER 201	Intermediate German
GER 202	Intermediate German II		GER 202	Intermediate German

RAE 150	Elementary Chinese I		RAE 150	Beginning Chinese I
RAE 151	Elementary Chinese II		RAE 151	Beginning Chinese II
SED 101	Sign Language I		SED 101	American Sign Language I
SED 102	Sign Language II		SED 102	American Sign Language II
SED 203	Sign Language III		SED 203	American Sign Language III
SED 204	Sign Language IV		SED 204	American Sign Language IV
SPA 201	Intermediate Spanish I		SPA 201	Intermediate Spanish III (Spoken Approach)
SPA 202	Intermediate Spanish II		SPA 202	Intermediate Spanish IV (Spoken Approach)

General College Studies: 2010-2011

New Courses			**Old Courses**	
GEN 100	Introduction to College		GE 100	Introduction to College
GEN 102	Foundations of Learning		GE 101	Strategies for Academic Success
AGR 101	The Economics of Food and Agriculture		GEN 101	The Economics of Food and Agriculture
GEN 103	Principles of Peer Mentoring		GE 103	Principles of Peer Mentoring
GEN 104	Applied Principles of Peer Mentoring		GE 104	Applied Principles of Peer Mentoring
GEN 120	Service Learning		GE 120	Service Learning
GEN 122	The Exemplary Tutor		GE 122	The Exemplary Tutor
GEN 123	The Exemplary Reading Tutor		GE 123	The Exemplary Reading Tutor
GEN 125	Applied Meta-Thinking			
GEN 130	Introduction to Information Resources		GE 130	Introduction to Information Resources
GEN 131	Basic Library Research and Resources		GE 131	Basic Library Research and Resources
GEN 140	Development of Leadership		GE 140	Development of Leadership
GEN 150	Basic Computer Skills		GE 150	Computer Literacy
GEN 175	Career and Life Skills Development			
GEN 225	Lifelong Learning Applications			
GEN 276	Employment and Professional Skills		GEC 276	Employment and Professional Skills

Global Studies: 2011-2012

New Courses			**Old Courses**	
GBS 290	Global Studies Capstone Course		GS 290	Global Studies Capstone Course

Health Physics: 2011-2012

New Courses			Old Courses	
HPH 100	Health Physics Fundamentals		HP 100	Health Physics Fundamentals
HPH 101	Introduction to Health Physics I		HP 101	Introduction to Health Physics I
HPH 102	Introduction to Health Physics II		HP 102	Introduction to Health Physics II
HPH 120	Introduction to Radiation Biology		HP 120	Introduction to Radiation Biology
HPH 201	Nuclear Instrumentation and Measurement I		HP 201	Nuclear Instrumentation and Measurement I
HPH 202	Nuclear Instrumentation and Measurement II		HP 202	Nuclear Instrumentation and Measurement II
HPH 246	Environmental Law		ENVR 246	Environmental Law

Homeland Security/Emergency Management: 2011-2012

New Courses			Old Courses	
HSM 100	Introduction to Homeland Security		HSEM 100	Introduction to Homeland Security
HSM 110	Introduction to Emergency Management		HSEM 110	Introduction to Emergency Management
HSM 225	Ethical and Legal Issues in Homeland Security		HSEM 225	Ethical and Legal Issues in Homeland Security

Human Services : 2011-2012

New Courses			Old Courses	
HMS 101	Human Services Survey		HS 101	Human Services Survey
HMS 102	Values of Human Services in a Contemporary Society		HS 102	Values of Human Services in a Contemporary Society
HMS 103	Theories and Techniques in Human Services		HS 103	Theories and Techniques in Human Services
HMS 104	Group Dynamics for Human Services		HS 104	Group Dynamics for Human Services
HMS 200	Dynamics of Human Behavior		HS 200	Dynamics of Human Behavior
HMS 210	Drugs, Society & Human Behavior		HS 210	Drugs, Society & Human Behavior
HMS 211	Introductions to Addictions		HS 211	Introductions to Addictions
HMS 212	Crisis Intervention		HS 212	Crisis Intervention
HMS 220	Cultural Diversity in Human Services		HS 220	Cultural Diversity in Human Services
HMS 235	Teaching Persons with Mental Retardation		HS 235	Teaching Persons with Mental Retardation
HMS 250	Clinical Practice in Human Services		HS 250	Clinical Practice in Human Services
HMS 265	Working with Disabilities in Human Services		HS 265	Working with Disabilities in Human Services
HMS 299	Special Topics in Human Services: (Topic)		HS 299	Special Topics in Human Services: (Topic)
SWK 124	Introduction to Social Services		SW 124	Introduction to Social Services
SWK 222	Development of Social Welfare		SW 222	Development of Social Welfare

Industrial Safety: 2012-2013

New Courses			Old Courses	
ISX 101	Introduction to Industrial Safety		IS 100	Introduction to Industrial Safety

Industrial Technology: 2012-2013

New Courses			Old Courses	
ITE 233	Statistical Process Control		INDT 233	Statistical Process Control
ITE 250	Team Dynamics and Problem Solving		INDT 250	Team Dynamics and Problem Solving

Logistics and Operations Management: 2013-2014

New Courses			Old Courses	
LOM 180	Project Management		IT 180	Project Management

Masonry: 2011-2012

New Courses			Old Courses	
	Dropped		MASE 101	Special Problems I
MSY 105	Introductory Masonry		MASE 105	Introductory Masonry
MSY 115	Intermediate Masonry		MASE 115	Intermediate Masonry
MSY 198	Practicum I		MASE 198	Practicum
MSY 199	Cooperative Education I		MASE 199	Cooperative Education
	Dropped		MASE 201	Special Problems II
MSY 205	Advanced Masonry		MASE 205	Advanced Masonry
MSY 215	Masonry Lab		MASE 215	Masonry Lab
MSY 225	Brick Construction		MASE 225	Brick Construction
MSY 235	Special Techniques in Brick Construction		MASE 235	Special Techniques in Brick Construction
MSY 245	Anchors and Reinforcement		MASE 245	Anchors and Reinforcement
MSY 251	Concrete Finishing		MASE 251	Concrete Finishing
MSY 253	Masonry Floors and Steps		MASE 253	Masonry Floors and Steps
MSY 255	Glass Blocks and Tile		MASE 255	Glass Blocks and Tile
MSY 257	Stone		MASE 257	Stone
MSY 275	Fireplace Construction		MASE 275	Fireplace Construction
MSY 291	Masonry Applications		MASE 291	Special Problems III
MSY 298	Practicum II		MASE 298	Practicum
MSY 299	Cooperative Education II		MASE 299	Cooperative Education

Math: 2012-2013

New Courses			Old Courses	
	DROPPED		MAT 120	Intermediate Algebra
MAT 190	Mathematics Workshop		MT 190	Mathematics Workshop

Medical Information Technology: 2012-2013

New Courses			Old Courses	
MIT 103	Medical Office Terminology		OST 103	Medical Office Terminology
MIT 104	Medical Insurance		OST 104	Introduction to Medical Insurance
MIT 106	Introduction to Medical Transcription		OST 106	Introduction to Medical Transcription
MIT 204	Medical Coding		OST 204	Medical Coding
MIT 205	Advanced Medical Coding		OST 205	Advanced Medical Coding
MIT 206	Medical Transcription		OST 206	Medical Transcription
MIT 208	Inpatient Coding		OST 208	Introduction to Hospital Coding
MIT 212	Medications		OST 212	Medications
MIT 217	Medical Office Procedures		OST 217	Medical Office Procedures
MIT 227	Medical Office Software		OST 227	Medical Office Software
MIT 228	Electronic Medical Records		OST 228	Electronic Medical Records
MIT 230	Medical Information Management		OST 230	Medical Records and Data Management

Medical Laboratory Technology: 2013-2014

New Courses			Old Courses	
MLT 101	Introduction to Clinical Laboratory		CLT 101	Introduction to Clinical Laboratory
MLT 112	Urinalysis		CLT 111	Urinalysis
MLT 115	Serology		CLT 125	Serology
MLT 119	Applied Laboratory		CLT 130	Applied Laboratory
MLT 1191	Applied Laboratory Part 1		CLT 1301	Applied Laboratory Part 1
MLT 1192	Applied Laboratory Part 2		CLT 1302	Applied Laboratory Part 2
MLT 205	Clinical Microbiology I		CLT 205	Clinical Microbiology I
MLT 206	Clinical Microbiology II		CLT 206	Clinical Microbiology II
MLT 207	Introduction to Clinical Diagnostic Microbiology		CLT 207	Introduction to Clinical Diagnostic Microbiology
MLT 208	Clinical Diagnostic Microbiology I		CLT 208	Clinical Diagnostic Microbiology I
MLT 209	Clinical Diagnostic Microbiology II		CLT 209	Clinical Diagnostic Microbiology II
MLT 215	Hematology I		CLT 215	Hematology I

MLT 216	Hematology II		CLT 216	Hematology II
MLT 217	Fundamentals of Hematology		CLT 217	Fundamentals of Hematology
MLT 218	Clinical Hematology		CLT 218	Clinical Hematology
MLT 225	Immunohematology I		CLT 225	Immunohematology I
MLT 226	Immunohematology II		CLT 226	Immunohematology II
MLT 227	Immunohematology		CLT 227	Immunohematology
MLT 233	Clinical Chemistry I		CLT 235	Clinical Chemistry I
MLT 234	Clinical Chemistry II		CLT 236	Clinical Chemistry II
MLT 247	Introduction to Clinical Chemistry		CLT 237	Introduction to Clinical Chemistry
MLT 248	Advanced Clinical Chemistry		CLT 238	Advanced Clinical Chemistry
MLT 275	Clinical Experience		CLT 275	Clinical Experience
MLT 278	Practicum I		CLT 280	Practicum I
MLT 2781	Practicum I Part I		CLT 2801	Practicum I Part I
MLT 2782	Practicum I Part II		CLT 2802	Practicum I Part II
MLT 279	Practicum II		CLT 290	Practicum II
MLT 2791	Practicum II Part I		CLT 2901	Practicum II Part I
MLT 2792	Practicum II Part II		CLT 2902	Practicum II Part II

Mining Technology: 2011-2012

New Courses			**Old Courses**	
	Dropped		ET 100	Introduction to Surface and Underground Coal Mining
MNG 123	Mining Electricity I		ET 123	Mining Electricity I
MNG 125	Mining Electricity I Lab		ET 125	Mining Electricity I Lab
MNG 150	Mining Laws		ET 150	Mining Laws
	Dropped		ET 154	Spoil Management
	Dropped		ET 155	Elements of Underground and Surface Mining
	Dropped		ET 156	Elements of Underground and Surface Mining Lab I
	Dropped		ET 157	Elements of Underground and Surface Mining Lab II
MNG 190	Mine Emergency Technician		ET 190	Mine Emergency Technician
	Dropped		ET 271	Mining Mechanics and Hydraulics
MNG 274	Mine Safety		ET 274	Mine Safety
MNG 275	Mine Management		ET 275	Mine Management
MNG 286	Roof Control and Ventilation		ET 286	Roof Control and Ventilation

Music: 2010-2011

New Courses			Old Courses	
	Dropped		MU 101	Folk and Traditional Music of the Western Continents
	Dropped		MUC 171	Brass Ensemble
	Dropped		MUC 174	University Chorale
MUS 100	Introduction to Music		MUS 100	Introduction to Music
MUS 120	Music Technology I		MU 120	Music Technology I
MUS 121	Music Technology II		MU 121	Music Technology II
MUS 150	Class Instruction in Piano I		MUC 150	Class Instruction in Piano
MUS 151	Class Instruction in Piano II		MUC 151	Class Instruction in Piano
MUS 152	Class Instruction in Piano III		MUC 152	Class Instruction in Piano
MUS 153	Class Instruction in Piano IV		MUC 153	Class Instruction in Piano
MUS 155	Voice Class for Non-Music Majors		MUC 155	Voice Class for Non-Music Majors
	Dropped		MUS 170	Music Theory, Aural
	Dropped		MUS 171	Music Theory, Written
	Dropped		MUS 172	Music Theory, Aural
	Dropped		MUS 173	Music Theory, Written
MUS 174	Theory for Non Music Majors		MUS 174	Theory for Non Music Majors
MUS 192	University Chorus		MUC 174 & MUC 192	University Chorale and University Singers
MUS 206	American Music History		MUS 206	American Music History American Music History
	Dropped		MUS 220	Symphonic Music
MUS 222	History and Sociology of Rock Music		MUS 222	History and Sociology of Rock Music
MUS 260	Teaching Music for the Elementary Grades I		MUS 260	Teaching Music for the Elementary Grades I
MUS 261	Teaching Music for the Elementary Grades II		MUS 261	Teaching Music for the Elementary Grades II

Nuclear Medicine & Molecular Imaging: 2011-2012

New Courses			Old Courses	
NMI 140	Clinical Procedures I		NMMI 140	Clinical Procedures I
NMI 141	Physics and Instrumentation I		NMMI 141	Physics and Instrumentation I
NMI 142	Radiation Biology and Protection		NMMI 142	Radiation Biology and Protection
NMI 150	Clinic I		NMMI 150	Clinic I
NMI 160	Clinical Procedures II		NMMI 160	Clinical Procedures II
NMI 161	Physics and Instrumentation II		NMMI 161	Physics and Instrumentation II

NMI 170	Clinic II		NMMI 170	Clinic II
NMI 220	Clinic III		NMMI 220	Clinic III
NMI 230	Radiopharmacy		NMMI 230	Radiopharmacy
NMI 240	Clinical Procedures III		NMMI 240	Clinical Procedures III
NMI 250	Clinical Procedures IV		NMMI 250	Clinical Procedures IV
NMI 260	Clinic IV		NMMI 260	Clinic IV
NMI 270	Clinic V		NMMI 270	Clinic V

Nursing (BCTC): 2011-2012

New Courses			**Old Courses**	
NRN 115	Nursing I		NR 115	Nursing I
NRN 125	Nursing II		NR 125	Nursing II
NRN 235	Nursing III		NR 235	Nursing III
NRN 245	Nursing IV		NR 245	Nursing IV
NRN 255	Nursing V		NR 255	Nursing V
NRN 265	Nursing VI		NR 265	Nursing VI

Philosophy: 2010-2011

New Courses			**Old Courses**	
PHI 100	Introduction to Philosophy: Knowledge and Reality		PHI 100	Introduction to Philosophy: Knowledge and Reality
PHI 110	Medical Ethics		PHL 110	Bioethics: Moral Issues in Health Care
PHI 130	Ethics		PHI 130	Introduction to Philosophy: Morality and Society
PHI 150	Business Ethics		PHL 120	Business Ethics
PHI 260	History of Philosophy I: From Greek Beginnings to the Middle Ages		PHI 260	History of Philosophy I: From Greek Beginnings to the Middle Ages
PHI 270	History of Philosophy II: From the Renaissance to the Present Era		PHI 270	History of Philosophy II: From the Renaissance to the Present Era

Physics: 2010-2011

NEW Courses			**OLD Courses**	
Prefix	Title		Prefix	Title
PHY 151	Introductory Physics I		PHY 151	Introduction to Physics
PHY 152	Introductory Physics II		PHY 152	Introduction to Physics
PHY 160	Physics and Astronomy for Elementary Teachers		PHY 160	Physics and Astronomy for Elementary Teachers
PHY 161	Introductory Physics I Laboratory		PH 161	Introductory Physics Laboratory I

PHY 162	Introductory Physics II Laboratory		PH 162	Introductory Physics Laboratory II
PHY 171	Applied Physics		PH 171	Applied Physics
PHY 172	Physics for Health Sciences		PH 172	Physics for Health Sciences
PHY 201	College Physics I		PHY 201	General Physics
PHY 202	College Physics I Laboratory		PHY 210	Special Laboratory for General Physics PHY 201
	Deactivated		PHY 211	General Physics
PHY 203	College Physics II		PHY 203	General Physics
PHY 204	College Physics II Laboratory		PHY 212	Special Laboratory for General Physics PHY 203
	Deactivated		PHY 213	General Physics
PHY 231	General University Physics I		PHY 231	General University Physics
PHY 232	General University Physics II		PHY 232	General University Physics
PHY 241	General University Physics I Laboratory		PHY 241	General University Physics Laboratory
PHY 242	General University Physics II Laboratory		PHY 242	General University Physics Laboratory

Political Science: 2010-2011

New Courses			**Old Courses**	
POL 101	American Government		PS 101	American Government
POL 210	Introduction to European Politics: East and West		PS 210	Introduction to European Politics: East and West
POL 212	Culture and Politics in Developing Nations		PS 212	Culture and Politics in the Third World
POL 235	World Politics		PS 235	World Politics
POL 255	State Government		PS 155	State Government
POL 280	Issues in Public Policy		PS 280	Issues in Public Policy
POL 299	Special Topics in Political Science		PS 299	Special Topics in Political Science

NOTE: POL 271 removed from general education status.

Professional Studio Artist: 2011-2012

New Courses			**Old Courses**	
PSJ 110	Jewelry/Metals I		PSAJ 110	Jewelry/Metals I
PSJ 115	Jewelry/Metals II		PSAJ 115	Jewelry/Metals II
PSJ 116	Ancient Techniques		PSAJ 116	Ancient Techniques
PSJ 117	Metal Casting/Finishing Techniques		PSAJ 117	Metal Casting/Finishing Techniques
PSJ 210	Jewelry/Metals III		PSAJ 210	Jewelry/Metals III
PSJ 211	Hollowware and Metal Forming		PSAJ 211	Hollowware and Metal Forming
PSJ 212	Metallurgy of Precious Metals		PSAJ 212	Metallurgy of Precious Metals

PSJ 215	Jewelry/Metals IV		PSAJ 215	Jewelry/Metals IV
PSJ 216	Stone Settings		PSAJ 216	Stone Settings
PSJ 220	Jewelry/Metals Product Development		PSAJ 220	Jewelry/Metals Product Development
PSJ 230	Jewelry/Metals V		PSAJ 230	Jewelry/Metals V
PSM 101	Bluegrass & Traditional Music History I: Geographic Influence & Instrumental Origin		PSAM 101	Bluegrass & Traditional Music History I: Geographic Influence & Instrumental Origin
PSM 105	Recording I		PSAM 105	Recording I
PSM 108	Songwriting I		PSAM 108	Songwriting I
PSM 110	Individual Stringed Instrument Instruction		PSAM 110	Individual Stringed Instrument Instruction
PSM 111	Guitar I		PSAM 111	Guitar I
PSM 115	Bluegrass & Traditional Band/Ensemble		PSAM 115	Bluegrass & Traditional Band/Ensemble
PSM 116	Bluegrass & Traditional Harmony/Part Singing		PSAM 116	Bluegrass & Traditional Harmony/Part Singing
PSM 121	Bluegrass & Traditional Music History II: Evolution of Old Time, Folk and Early Bluegrass		PSAM 121	Bluegrass & Traditional Music History II: Evolution of Old Time, Folk and Early Bluegrass
PSM 125	Recording II		PSAM 125	Recording II
PSM 128	Songwriting II		PSAM 128	Songwriting II
PSM 231	Bluegrass & Traditional Music History III: Early Stringband & Country Music		PSAM 231	Bluegrass & Traditional Music History III: Early Stringband & Country Music
PSM 235	Recording III		PSAM 235	Recording III
PSM 238	Songwriting III		PSAM 238	Songwriting III
PSM 241	Bluegrass & Traditional Music History IV: The Masters & Their Music		PSAM 241	Bluegrass & Traditional Music History IV – The Masters & Their Music
PSM 245	Recording IV		PSAM 245	Recording IV
PSM 248	Songwriting IV		PSAM 248	Songwriting IV
PSM 250	Field Experience/Production/Business		PSAM 250	Field Experience/Production/Business
PSW 111	Introduction to Furniture Making		PSAW 111	Introduction to Furniture Making
PSW 115	Furniture Making II		PSAW 115	Furniture Making II
PSW 116	Wood Finishing		PSAW 116	Wood Finishing
PSW 117	Wood Turning for Furniture		PSAW 117	Wood Turning for Furniture
PSW 210	Furniture Making III		PSAW 210	Furniture Making III
PSW 211	Wood Bending and Veneering		PSAW 211	Wood Bending and Veneering
PSW 212	Chair Design		PSAW 212	Chair Design
PSW 215	Furniture Making IV		PSAW 215	Furniture Making IV
PSW 220	Furniture/Wood Product Development		PSAW 220	Furniture/Wood Product Development
PSW 230	Furniture Making V		PSAW 230	Furniture Making V

Professional Studio Artist: 2013-2014

New Courses			Old Courses	
PSM 107	Songwriting I		PSM 108	Songwriting I
PSM 112	Individual Stringed Instrument Instruction		PSM 110	Individual Stringed Instrument Instruction
PSM 113	Guitar I		PSM 111	Guitar I
PSM 114	Bluegrass & Traditional Band/Ensemble		PSM 115	Bluegrass & Traditional Band/Ensemble
PSM 117	Songwriting II		PSM 128	Songwriting II
PSM 118	Bluegrass & Traditional Harmony/Part Singing		PSM 116	Bluegrass & Traditional Harmony/Part Singing
PSM 217	Songwriting III		PSM 238	Songwriting III
PSM 227	Songwriting IV		PSM 248	Songwriting IV

Psychology: 2010-2011

New Courses			Old Courses	
	Dropped		PSY 100	Introduction to Psychology
PSY 110	General Psychology		PY 110	General Psychology
PSY180	Human Relations		PY 180	Human Relations
PSY 185	Human Potential		PY 185	Human Potential
PSY 230	Psychosocial Aspects of Death and Dying		PY 230	Psychosocial Aspects of Death and Dying
PSY 297	Psychology of Aging		PY 297	Psychology of Aging

Psychology: 2012-2013

New Courses			Old Courses	
PSY 298	Essentials of Abnormal Psychology		PY 298	Essentials of Abnormal Psychology

Psychology: 2013-2014

New Courses			Old Courses	
PSY 181	Leadership Development		PY 181	Leadership Development
PSY 188	Directed Undergraduate Readings in Psychology		PY 188	Directed Undergraduate Readings in Psychology
PSY 189	Directed Undergraduate Research in Psychology		PY 189	Directed Undergraduate Research in Psychology
PSY 212	Applications of Statistics in Psychology		PSY 216	Applications of Statistics in Psychology
PSY 213	Research Methods		PSY 215	Experimental Psychology
PSY 299	Special Introductory Topics in Psychology		PY 299	Special Introductory Topics in Psychology

Radiography: 2011-2012

New Courses			Old Courses	
IMG 100	Radiography I		RADI 100	Radiography I
IMG 101	Clinical I		RADI 101	Clinical I
IMG 104	Introduction to Radiography		RADI 104	Introduction to Radiography
IMG 106	Patient Care in Radiography		RADI 106	Patient Care in Radiography
IMG 108	Radiographic Procedures I		RADI 108	Radiographic Procedures I
IMG 109	Clinical Practice I		RADI 109	Clinical Practice I
IMG 110	Radiography II		RADI 110	Radiography II
IMG 111	Clinical II		RADI 111	Clinical II
IMG 114	Image Production and Acquisition		RADI 114	Image Production and Acquisition
IMG 116	Advanced Patient Care in Radiography		RADI 116	Advanced Patient Care in Radiography
IMG 118	Radiographic Procedures II		RADI 118	Radiographic Procedures II
IMG 119	Clinical Practice II		RADI 119	Clinical Practice II
IMG 201	Clinical III		RADI 201	Clinical III
IMG 209	Clinical Practice III		RADI 209	Clinical Practice III
IMG 210	Radiography IV		RADI 210	Radiography IV
IMG 211	Clinical IV		RADI 211	Clinical IV
IMG 214	Imaging Equipment		RADI 214	Imaging Equipment
IMG 216	Basic Computed Tomography		RADI 216	Basic Computed Tomography
IMG 219	Clinical Practice IV		RADI 219	Clinical Practice IV
IMG 220	Radiography V		RADI 220	Radiography V
IMG 221	Clinical V		RADI 221	Clinical V
IMG 224	Radiation Protection and Biology		RADI 224	Radiation Protection and Biology
IMG 226	Radiographic Pathology		RADI 226	Radiographic Pathology
IMG 228	Radiography Seminar		RADI 228	Radiography Seminar
IMG 229	Clinical Practice V		RADI 229	Clinical Practice V
IMG 230	Sectional Anatomy for Advanced Medical Imaging		RADI 230	Sectional Anatomy for Advanced Medical Imaging
IMG 240	Pathology for Advanced Medical Imaging Modalities		RADI 240	Pathology for Advanced Medical Imaging Modalities
IMG 250	Computed Tomography Physics and Instrumentation		RADI 250	Computed Tomography Physics and Instrumentation
IMG 255	Magnetic Resonance Physics and Instrumentation		RADI 255	Magnetic Resonance Physics and Instrumentation
IMG 260	Computed Tomography Imaging Procedures		RADI 260	Computed Tomography Imaging Procedures
IMG 265	Magnetic Resonance Imaging Technology		RADI 265	Magnetic Resonance Imaging Technology

Reading: 2012-2013

New Courses			Old Courses	
RDG 185	College Reading		CMS 185	College Reading

Real Estate: 2011-2012

New Courses			Old Courses	
REA 100	Real Estate Principles I		RE 100	Real Estate Principles I
REA 120	Real Estate Marketing		RE 120	Real Estate Marketing
REA 121	Appraising		RE 121	Appraising
REA 122	Construction and Blueprints		RE 122	Construction and Blueprints
REA 200	Real Estate Principles II		RE 200	Real Estate Principles II
REA 201	Property Management		RE 201	Property Management
REA 202	Real Estate Investments I		RE 202	Real Estate Investments I
REA 203	Commercial and Industrial Property		RE 203	Commercial and Industrial Property
REA 204	Land Planning and Development		RE 204	Land Planning and Development
REA 205	Farm Brokerage		RE 205	Farm Brokerage
REA 212	Real Estate Investments II		RE 212	Real Estate Investments II
REA 220	Real Estate Brokerage Management		RE 220	Real Estate Brokerage Management
REA 221	Basic Income Approach to Property Validation		RE 221	Basic Income Approach to Property Validation
REA 222	Uniform Standards of Professional Appraisal		RE 222	Uniform Standards of Professional Appraisal
REA 225	Real Estate Finance		RE 225	Real Estate Finance
REA 230	Real Estate Law		RE 230	Real Estate Law
REA 299	Selected Topics in Real Estate		RE 299	Selected Topics in Real Estate

Religion: 2010-2011

New Courses			Old Courses	
REL 101	Introduction to Religion		RS 101	Introduction to Religion Studies
REL 102	Philosophy of Religion		RS 102	Philosophy of Religion
REL 120	Introduction to the Old Testament		RS 120	Introduction to the Old Testament
REL 121	Introduction to the New Testament		RS 121	Introduction to the New Testament
REL 130*	Introduction to Comparative Religion		RS 130	Introduction to Comparative Religion

*Cross-listed with ANT 130

Theatre: 2010-2011

New Courses			Old Courses	
THA 101	Introduction to Theatre: Principles and Practice		TA 101	Introduction to Theatre: Principles and Practice
THA 126	Acting I: Fundamentals of Acting		TA 126	Acting I: Fundamentals of Acting
THA 127	Acting Techniques		TA 127	Acting Techniques
THA 150	Fundamentals of Production		TA 150	Fundamentals of Production
THA 190	Production Practicum		TA 190	Production Practicum
THA 191	Performance Practicum		TA 191	Performance Practicum
THA 196	Summer Theatre Workshop		TA 196	Summer Theatre Workshop
THA 200	Introduction to Dramatic Literature		TA 200	Introduction to Dramatic Literature
THA 203	Acting for the Camera		TA 203	Acting for the Camera
THA 226	Acting II: Scene Study (Realism)		TA 226	Acting II: Scene Study (Realism)
THA 227	Acting III: Scene Study (Styles)		TA 227	Acting III: Scene Study (Styles)
THA 260	Stagecraft		TA 260	Stagecraft
THA 283	American Theatre		TA 283	American Theatre

Transitional Mathematics: 2012-2013

New Courses			Old Courses	
MAT 085	Intermediate Algebra			NEW COURSE

Women's and Gender Studies: 2010-2011

New Courses			Old Courses	
WGS 200	Introduction to Women's and Gender Studies in the Social Sciences		WS 200	Introduction to Women's Studies in the Social Sciences
WGS 201	Introduction to Women's and Gender Studies in the Arts and Humanities		WS 201	Introduction to Women's Studies in the Arts and Humanities

Appendix F

Gainful Employment Disclosures

These disclosures provide important information about the educational debt, earnings, and completion rates of students who attend the program. Below you will find links to the GE disclosures for each college.

Ashland Community and Technical College:
http://www.ashland.kctcs.edu/en/Academics/Gainful_Employment_Disclosure_Information.aspx

Big Sandy Community and Technical College:
http://www.bigsandy.kctcs.edu/en/Academics/Gainful_Employment_Disclosure_Information.aspx

Bluegrass Community and Technical College:
http://www.bluegrass.kctcs.edu/Academics/Gainful_Employment_Disclosure_Information.aspx

Elizabethtown Community and Technical College:
http://www.elizabethtown.kctcs.edu/en/Academics/Gainful_Employment_Disclosure_Information.aspx

Gateway Community and Technical College:
http://www.gateway.kctcs.edu/en/Academics/Gainful_Employment_Disclosure_Information.aspx

Hazard Community and Technical College:
http://www.hazard.kctcs.edu/en/Academics/Gainful_Employment_Disclosure_Information.aspx

Henderson Community College:
http://www.henderson.kctcs.edu/en/Academics/Gainful_Employment_Disclosure_Information.aspx

Hopkinsville Community College:
http://www.hopkinsville.kctcs.edu/en/Academics/Gainful_Employment_Disclosure_Information.aspx

Jefferson Community and Technical College:
http://www.jefferson.kctcs.edu/en/Academics/Gainful_Employment_Disclosure_Information.aspx

Madisonville Community College:
http://www.madisonville.kctcs.edu/en/Academics/Gainful_Employment_Disclosure_Information.aspx

Maysville Community and Technical College:
http://www.maysville.kctcs.edu/en/Academics/Gainful_Employment_Disclosure_Information.aspx

Owensboro Community and Technical College:
http://www.owensboro.kctcs.edu/en/Academics/Gainful_Employment_Disclosure_Information.aspx

Somerset Community College:
http://www.somerset.kctcs.edu/en/Academics/Gainful_Employment_Disclosure_Information.aspx

Southcentral Kentucky Community and Technical College:
http://southcentral.kctcs.edu/en/Academics/Gainful_Employment_Disclosure_Information.aspx

Southeast Community and Technical College:
http://www.southeast.kctcs.edu/en/Academics/Gainful_Employment_Disclosure_Information.aspx

West Kentucky Community and Technical College:
http://www.westkentucky.kctcs.edu/en/Academics/Gainful_Employment_Disclosure_Information.aspx

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