State Fair
Community College

2026-2027

COURSE CATALOG

sfccmo.edu

Associate of Arts

The Associate of Arts (AA) degree from State Fair Community College is designed for the student who wants to transfer to a fouryear college or university to earn a bachelor's degree. If you're undecided on a major, the AA degree can serve as a springboard to explore new interests. It allows for flexibility and provides a wide choice of classes. We're here to help you discover the huge variety of academic programs and transfer options available to you with an Associate of Arts degree.

General Education Core — 42 Hours

Written Communications — 6 Hours

ENGL 101	English Composition I	3
ENGL 102	English Composition II	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3
COMM 103	Small Group Communication	3
COMM 105	Interpersonal Communication	3
COMM 190	Argumentation and Debate	3

Social and Behavioral Sciences — 9 Hours

Coursework must include classes from at least two disciplines, including at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

Civics

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Criminal Justice

CJ 102	Introduction to Criminal Justice	3

Criminology

CJ 107	Criminology	3

Economics

AGRI 132	Agriculture Economics	3
ECON 101	Macroeconomics	3
ECON 102	Microeconomics	3

Geography

GEOG 101	World Geography	3

History

HIST 108	World History Before 1500	3
HIST 109	World History After 1500	3

Psychology

PSY 101	General Psychology	3
PSY 210	Lifespan Development	3

Social & Behavioral Science Communications

COMM 110	Introduction to Mass Communication	3
SOC 110	Media, Culture and Society	3

Sociology

SOC 100	General Sociology	3
SOC 101	Social Problems	3
SOC 102	Marriage and Family	3
SOC 120	American Diversity	3

Mathematical Sciences — 3 Hours

MATH 113	Mathematical Reasoning & Modeling	3
MATH 114	Precalculus Algebra	3
MATH 119	Statistical Reasoning	3

Natural Sciences — 7 Hours

Must include courses from at least two disciplines, including one course with a lab component

Astronomy

EASC 120	Introduction to Astronomy	3

Biology

BIO 100	Essentials of Biology	3
BIO 105	Introduction to Ecology	3
BIO 112	Principles of Biology with Lab	4
BIO 113	Cellular Biology	4
BIO 125	General Biology with Lab	4

Chemistry

CHEM 101	Introduction to Chemistry with Lab	4
CHEM 123	General Chemistry I with Lab	5

Geology

EASC 106	Introduction to Geology with Lab	4
EASC 118	Environmental Geology	3

Life Sciences

BIO 103	Human Biology	3
BIO 207	Human Anatomy with Lab	4
BIO 208	Human Physiology with Lab	4

Associate of Arts (Continued)

Physics

PHYS 110	Survey of Physics with Lab	5
PHYS 211	Engineering Physics I with Lab	5

Humanities and Fine Arts — 9 Hours

Must include courses from at least two disciplines, with a maximum of 3 credit hours from the performance discipline and the total General Education Core

Art

ART 101	Art Appreciation	3
ART 140	Art History Survey I	3
ART 142	Art History Survey II	3

Film

COMM 120	History of Film	3

Foreign Language

FREN 101	Elementary French I	3
FREN 102	Elementary French II	3
GERM 101	Elementary German I	3
GERM 102	Elementary German II	3
SPAN 101	Elementary Spanish I	3
SPAN 102	Elementary Spanish II	3

Literature

LIT 101	Introduction to Literature	3
LIT 107	American Literature	3
LIT 109	British Literature	3
LIT 112	World Literature	3

Music

MUS 100	Music Theory I	3
MUS 101	Music Appreciation	3
MUS 102	History of Rock Music	3
MUS 103	Music History & Literature Before 1800	3
MUS 104	Music History & Literature Since 1800	3

Performance/Production of Creative Arts

A maximum of 3 credit hours can be applied to the Humanities and Fine Arts category and the total General Education Core.

ART 112	Drawing I	3
ART 116	Painting I	3
ART 122	Sculpture I	3
ART 126	Ceramics I	3
ART 160	Introduction to Graphic Design	3
COMM 161	Media Productions I	3
ENGL 106	Creative Writing	3
MUS 119	Jazz Band I	1
MUS 196	Concert Band I	1
MUS 197	Concert Band II	1
MUS 204A	Chamber Singers I	1
MUS 210A	Contemporary Choir I	1
THEA 110	Stagecraft and Lighting	3
THEA 111	Acting I	3
THEA 119	Stage Makeup	3
THEA 131	Script Analysis	3

Philosophy

PHIL 101	Introduction to Philosophy	3
PHIL 102	Ethics	3

Religion

PHIL 104	Living Religions	3

Theatre

THEA 107	Introduction to Theatre	3

Interdisciplinary

**Does not count toward a knowledge area but does count toward CORE 42 credit hours.*

SS 104	College Skills	3
WELL 102	Wellness for the Individual	2

General Education Electives — 5 Hours

Select additional hours from the General Education categories listed above for a minimum total of 42 hours to meet the General Education Core. Any course with an approved MOTR number or additional hours from a MOTR approved course can be utilized to fulfill the General Education Core electives requirement.

Electives — 18 Hours

Additional courses numbered 100 or above may include 12 hours of restricted electives from technical training in the military or from technical courses taken at an accredited college. A maximum of 4 credit hours may be applied for THEA 115. Physical education activity and wellness courses (PE, PEAC, WELL, WL, XWLN, or XPAC prefix) may be accepted as elective credit for a maximum of 3 credit hours. Veterans, members of the National Guard and active-duty military personnel may receive 2 hours of wellness credit by presenting a copy of their DD214 or similar record.

Degree Total — 60 Hours

Associate of Applied Science in Agriculture Mechanics

The Agricultural Mechanics AAS will introduce students to various disciplines within the field of agriculture equipment repair. The Agricultural Mechanics degree and certificates are designed to develop service technicians for agricultural equipment repair across all equipment manufacturers. Classroom and hands on instruction topics will cover: basic agricultural mechanics, small engine repair, maintenance, electricity, hydraulics, fuel and emissions systems, transmission and drives, and precision systems. The Agricultural Mechanics program is a great starting point for students who have an interest in agriculture equipment, precision agriculture systems and understanding how to repair those systems to industry technical and safety standards. Students are required to complete an internship at the facility of their choice in which they will apply the skills they have learned throughout the program. Students will graduate with knowledge of drivetrain and diesel systems and will have hours of experience diagnosing and repairing agricultural equipment. Upon completion of the program, students will have proven their ability to think critically, solve complex mechanical issues and be ready for a career as a technician, working on farm equipment and utilizing Precision Ag systems in commercial agriculture

General Education Courses — 15 Hours

Written Communications — 3 Hours

ENGL 110	Communication for Business and Industry	3

Oral Communications — 6 Hours

COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3
COMM 105	Interpersonal Communication	3

Social and Behavioral Sciences — 3 Hours

Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

Civics

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Mathematical Sciences — 3 Hours

TECH 101	Technical Math	3

Sciences — 3 Hours

TECH 102	Applied Science	3

Program Requirements — 47 Hours

MECH 101	Introduction to Shop Operations^^	4
MECH 102	Electrical Fundamentals for Mechanics^^	3
MECH 103	Mobile Heating and Air Conditioning^^	4
MECH 104	Engine Fundamentals^^	4
MECH 105	Alternative Fuels^^	3
AGME 101	Agriculture Equipment Operation^^	2
AGME 103	Introduction to Precision Agriculture^^	3
AGME 104	Hydraulic Systems and Diagnostics^^	4
AGME 175	Agriculture Mechanics Internship^^	4
AGME 202	Agricultural Transmissions and Drives^^	4
AGME 203	Precision Agriculture Systems & Diagnostics^^	4
AGME 204	Agricultural Engine Performance & Mechanical^^	4
AGME 205	Ag Fuel and Emissions Systems^^	4

^^*Courses to complete with a grade of C or higher*

Degree Total — 62 Hours

Associate of Applied Science in Agriculture with Emphasis in Agribusiness

The Agribusiness program provides a vast assortment of opportunities. Firms supply farmers with fertilizer, seed, feed, fuel, chemicals, machinery, equipment, marketing, credit, and supplies. Agribusinesses also produce, buy, process, package, transport, and deliver livestock and products to the consumer. In agribusiness, trained staff familiar with agriculture, marketing, accounting, economics, and public relations is a must. Agriculture is one of the largest and most diverse industries in the world. Careers in agriculture are exciting and satisfying; the opportunities are numerous and the salaries competitive. Students interested in a career in agribusiness are self-motivated, goal-oriented, and take a tenacious, creative approach to problem solving. The technical and business skills to be gained will provide an advantage to work on the family farm or pursue a job in agribusiness. The program combines instruction with job experience. In addition to regular classroom hours, students work for a major industry in their chosen career field with an occupational internship. The internship provides a unique opportunity to apply the knowledge acquired in class to work situations.

General Education Courses — 18 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I	3
ENGL 110	Communication for Business and Industry	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3
COMM 190	Argumentation and Debate	3

Social and Behavioral Sciences — 6 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

Civics

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Economics

AGRI 132	Agriculture Economics	3
ECON 101	Macroeconomics	3
ECON 102	Microeconomics	3

Mathematical Sciences — 3 Hours

TECH 101	Technical Math	3
MATH 101	Business Math or Higher	3

Sciences — 3 Hours

AGRI 119	Soils I with Lab	4
BIO 105	Introduction to Ecology	3
BIO 112	Principles of Biology with Lab	4

Program Requirements — 27 Hours

AGRI 107	Foundations of Agriculture	3
AGRI 108	Animal Science	3
AGRI 118	Introduction to Crop Science	3
AGRI 129	General Horticulture	3
AGRI 131	Introduction to Agribusiness Systems	3
AGRI 134	Marketing Farm Commodities	3
AGRI 138	Ag Business Management	3
AGRI 175	Occupational Internship	3
CAPP 125	Microcomputer Applications	3

Program Electives — 15 Hours

Choose any AGRI course
Choose any AGME course
Choose any BADM course
Choose any BSMT course
Choose any CDL course
Choose any CNST course
Choose any EDT course
Choose any IEM course
Choose any WELD course

Degree Total — 60 Hours

Associate of Applied Science in Agriculture with Emphasis in Agronomy

The Agronomy program provides students with a strong foundation to pursue a career in an agronomic related field. As world population approaches nine billion people, agronomists will be responsible for increasing food production on fewer acres while ensuring resources will be available for future generations. Employment opportunities include crop and seed production; fertilizer sales and application; pest and weed control; seed sales; crop scouting; seed analysts, and soil scientists. Course work focuses on soil and plant sciences, soil erosion management, soil fertilization, and chemical safety and application. In addition to regular classroom hours, students work for an employer in the agronomy industry with an occupational internship. The internship provides a unique opportunity to apply the knowledge acquired in class to work situations.

General Education Courses — 16 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I	3
ENGL 110	Communication for Business and Industry	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3
COMM 190	Argumentation and Debate	3

Social and Behavioral Sciences — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

Civics

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Mathematical Sciences — 3 Hours

TECH 101	Technical Math	3
MATH 101	Business Math or Higher	3

Sciences — 4 Hours

AGRI 119	Soils I with Lab	4

Program Requirements — 31 Hours

AGRI 107	Foundations of Agriculture	3
AGRI 118	Introduction to Crop Science	3
AGRI 121	Soils II	3
AGRI 125	Natural Resources	3
AGRI 127	Farm Chemicals	3
AGRI 129	General Horticulture	3
AGRI 131	Introduction to Agribusiness Systems	3
AGRI 168	Commercial Applicator Licensing	2
AGRI 174	Crop and Insect Scouting	2
AGRI 175	Occupational Internship	3
CAPP 125	Microcomputer Applications	3

Program Electives — 13 Hours

Choose any AGRI course
Choose any AGME course
Choose any BADM course
Choose any BSMT course
Choose any CDL course
Choose any CNST course
Choose any EDT course
Choose any IEM course
Choose any WELD course

Degree Total — 60 Hours

Associate of Applied Science in Agriculture with Emphasis in Animal Science

The Animal Science program is focused on the livestock portion of the agricultural industry. Students will gain a fundamental knowledge of livestock production through animal selection and reproduction, nutrition, and management courses. This program focuses on all species of livestock and is intended for students pursuing a career in livestock production.

General Education Courses — 16 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I	3
ENGL 110	Communication for Business and Industry	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3
COMM 190	Argumentation and Debate	3

Social and Behavioral Sciences — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

Civics

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Mathematical Sciences — 3 Hours

TECH 101	Technical Math	3
MATH 101	Business Math or Higher	3

Sciences — 4 Hours

BIO 112	Principles of Biology with Lab	4

Program Requirements — 33 Hours

AGRI 107	Foundations of Agriculture	3
AGRI 108	Animal Science	3
AGRI 112	Livestock Evaluation and Management	3
AGRI 116	Animal Nutrition	3
AGRI 118	Introduction to Crop Science	3
AGRI 131	Introduction to Agribusiness Systems	3
AGRI 134	Marketing Farm Commodities	3
AGRI 138	Ag Business Management	3
AGRI 143	Animal Breeding & Reproductive Management	3
AGRI 175	Occupational Internship	3
CAPP 125	Microcomputer Applications	3

Program Electives — 13 Hours

Choose any AGRI course
Choose any AGME course
Choose any BADM course
Choose any BSMT course
Choose any CDL course
Choose any CNST course
Choose any EDT course
Choose any IEM course
Choose any WELD course

Degree Total — 60 Hours

Associate of Applied Science in Automotive Technology

The Automotive Technology program gives students the opportunity to study automotive systems in depth, beginning with fundamental principles and quickly advancing to more sophisticated theories and application.

Along with classroom study, the program is designed to help students develop a strong skill foundation through lab and shop learning activities. In today's automotive repair industry, technicians must have the ability to quickly diagnose and repair vehicle systems from the trivial problems to the most sophisticated. This course of study will prepare the student to embrace the everchanging technology associated with the automobile repair industry. An automotive technician must be well versed in computers, mathematics, reading, and communication skills, along with skills specific to the trade. The program will provide instruction on employability skills and shop operation management. Students frequently work with dirty and greasy parts and in awkward positions. They often lift heavy parts and tools. Minor cuts, burns and bruises are common.

The Automotive Technology program has attained national accreditation status from the National Automotive Technicians Education Foundation (NATEF), an affiliate of the National Institute of Automotive Service Excellence (ASE), signifying that the program meets uniform standards for instructional facilities, equipment, curriculum, and staff credentials.

General Education Courses — 15 Hours

Written Communications — 3 Hours

ENGL 110	Communication for Business and Industry	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3

Social and Behavioral Sciences — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

Civics

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Mathematical Sciences — 3 Hours

TECH 101	Technical Math or Higher	3

Sciences — 3 Hours

TECH 102	Applied Science	3

Program Requirements — 45 Hours

MECH 101	Introduction to Shop Operations	4
MECH 102	Electrical Fundamentals for Mechanics	3
MECH 103	Mobile Heating and Air Conditioning	4
MECH 104	Engine Fundamentals	4
MECH 105	Alternative Fuels	3
AUTO 106	Power Train Management	4
AUTO 113	Steering, Suspension and Wheels	4
AUTO 115	Automotive Brakes	4
AUTO 118	Automotive Electrical Systems	4
AUTO 175	Automotive Internship	3
AUTO 210	Drive Train Diagnosis & Repair	4
AUTO 225	Advanced Powertrain Systems	4

Degree Total — 60 Hours

Associate of Applied Science in Behavioral Health Support

The Behavioral Health Support (BHS) program will provide students with the education and skills needed to work in a variety of behavioral health or substance abuse support roles. Students will train for entry-level positions such as care coordinators, community support specialists, and case managers. Upon completion of the program, students will have the required skills to provide quality case management to clients in a variety of settings who need guidance and support. Students will be able to properly complete client documentation from intake to discharge including appropriate assessments, safety plans, treatment plans, and discharge summaries. They will be able to identify and utilize case-management treatment modalities for clients in the areas of behavioral health, substance abuse disorders, chronic health issues, and family and youth issues. Students will be qualified to work with behavioral health and medical professionals as part of a treatment team. Finally, students will know how to work within their own competency to provide services to those in need by valuing the dignity and worth of each client and recognizing the importance of the human relationship. Graduates will be prepared to begin working immediately in state, county, and local human service agencies, substance abuse treatment programs, rehabilitation centers, correction facilities, retirement facilities and schools along with various other human service agencies.

The SFCC Behavioral Health Support program is designated by the Department of Mental Health, Division of Behavioral Health, and the Missouri Behavioral Health Council.

Admission Process

Admission to the Behavioral Health Support program requires an additional admission application following admission to the college. An information/application packet is available online at https://www.sfccmo.edu/academics-programs/areas-ofstudy/behavioral-health/. This packet contains the essential qualifications and admission requirements, fee schedule, program mission and goals, sequencing of courses in program, and other pertinent information. Successful program applicants are subject to background checks and drug tests that could prevent an applicant's progression in the program.

Program Prerequisites — 33 30 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I^^	3

Oral Communications — 3 Hours

COMM 101	Public Speaking^^	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877^^	3
HIST 102	U.S. History Since 1877^^	3
POLS 101	American/National Government^^	3

Mathematical Sciences — 3 Hours

MATH 110	Intermediate Algebra with Review^^	5
MATH 112	Intermediate Algebra^^	3
MATH 114	Precalculus Algebra^^	3
MATH 119	Statistical Reasoning^^	3

Other Requirements — 18 Hours

BHS 200	Introduction to Behavioral Health Support^	3
CJ 102	Introduction to Criminal Justice^^	3
PSY 101	General Psychology^^	3
PSY 210	Lifespan Development^^	3
PSY 220	Abnormal Psychology^^	3
SOC 103	Introduction to Social Work^^	3

Program Requirements — 32 Hours

BHS 210	Law and Ethics^	3
BHS 220	Systems of Care^	3
BHS 230	Substance Abuse Intervention^	3
BHS 240	Client Encounters I^	3
BHS 250	Chronic Health Support^	3
BHS 260	Family and Youth Strategies^	3
BHS 270	Client Encounters II^	3
BHS 280	Evidence Based Treatment^	3
BHS 290	Field Practicum I^	4
BHS 295	Field Practicum II^	4

^Courses to complete with a grade of B or higher

^^Courses to complete with a grade of C or higher

Degree Total — 62 Hours

Associate of Applied Science in Business Management

In the Business Management program, students should possess leadership and decision-making skills and enjoy analyzing information and implementing solutions in a variety of situations. It is essential that a student possess good communication and human relation skills to be successful. Employment opportunities in this area typically are found in entry-level positions in human resource management, banking, insurance, and entry-level management in areas such as retail, sales and food service. Many students pursuing this degree are seeking to open their own business.

General Education Courses — 15 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I	3
ENGL 110	Communication for Business and Industry	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Mathematical Sciences — 3 Hours

MATH 101	Business Math	3
MATH 110	Intermediate Algebra with Review	5
MATH 112	Intermediate Algebra	3

Other General Education Requirements — 3 Hours

ECON 101	Principles of Macroeconomics	3
PHIL 102	Ethics	3
PSY 101	General Psychology	3
SOC 100	General Sociology	3
SPAN 101	Elementary Spanish I	3

Program Requirements — 34 Hours

ACCT 101	Principles of Financial Accounting	3
ACCT 109	Applied Accounting Procedures	3
BADM 101	Introduction to Business	3
BADM 103	Legal Environment of Business	3
BSMT 106	Principles of Marketing	3
BSMT 108	Principles of Management	3
BSMT 119	Customer Service Management	3
BSMT 125	Human Relations	3
BSMT 130	Business Strategies	3
BSMT 211	Data Analytics	3
CAPP 125	Microcomputer Applications	3
SS 120	Employment Strategies	1

Program Electives — 12 Hours

ACCT 102	Managerial Accounting	3
ACCT 135	Business and Federal Taxation	3
BADM 107	Personal Finance	3
BSMT 110	Salesmanship	3
BSMT 122	Digital Marketing Essentials	3
BSMT 175	Business Management Internship	3
CIS 103	Introduction To Computer Sciences	3
CIS 124	Database Management	3
CIS 185	Project Management	3
COMM 112	Introduction to Public Relations	3
ECON 101	Principles of Macroeconomics	3
WEB 103	Introduction to Web Development	3

Degree Total — 61 Hours

Associate of Applied Science in Computer Information Systems with Emphasis in Programming

The Computer Information Systems with Emphasis in Programming program prepares students to enter an exciting field of computer programming. Local, national and international companies including banks, insurance companies, state agencies, and major programming firms have hired State Fair Community College graduates. Students receive hands-on experience in programming. COBOL, DB2, Visual Basic, C#, and JAVA are taught in addition to courses in programming concepts, software and hardware applications, and computer operations. An internship provides an opportunity to apply knowledge and skills in a work environment.

General Education Courses — 15 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I	3
ENGL 110	Communication for Business and Industry	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3
COMM 105	Interpersonal Communication	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Mathematical Sciences — 3 Hours

MATH 101	Business Math	3
MATH 110	Intermediate Algebra with Review	5
MATH 112	Intermediate Algebra	3
MATH 113	Mathematical Reasoning & Modeling	3
MATH 114	Precalculus Algebra	3
MATH 119	Statistical Reasoning	3
TECH 101	Technical Math	3

Other General Education Requirements — 3 Hours

ECON 101	Principles of Macroeconomics	3
PHIL 102	Ethics	3

Program Requirements — 45 Hours

ART 165	Web Authoring and Graphic Tools^^	3
CIS 103	Introduction To Computer Sciences^^	3
CIS 120	Programming in Python^^	3
CIS 124	Database Management^^	3
CIS 144	Applied Artificial Intelligence Literacy^^	3
CIS 155	Programming in C#^^	3
CIS 157	Advanced C# with AI^^	3
CIS 161	Systems Analysis^^	3
CIS 170	Cloud and AI Fundamentals^^	3
CIS 174	Programming in C# with SQL^^	3
CIS 175	CIS Internship^^	3
CIS 220	Advanced Python^^	3
NET 101	Introduction to Networks^^	3
WEB 104	Android Applications^^	3
WEB 105	Apple Development^^	3

^^*Courses to complete with a grade of C or higher*

Degree Total — 60 Hours

Associate of Applied Science in Computer Information Systems with Emphasis in Web Development

The Computer Information Systems with Emphasis in Programming program prepares students to enter an exciting field of computer programming. Local, national and international companies including banks, insurance companies, state agencies, and major programming firms have hired State Fair Community College graduates. Students receive hands-on experience in programming. COBOL, DB2, Visual Basic, C#, and JAVA are taught in addition to courses in programming concepts, software and hardware applications, and computer operations. An internship provides an opportunity to apply knowledge and skills in a work environment.

General Education Courses — 15 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I	3
ENGL 110	Communication for Business and Industry	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3
COMM 105	Interpersonal Communication	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Mathematical Sciences — 3 Hours

MATH 101	Business Math	3
MATH 110	Intermediate Algebra with Review	5
MATH 112	Intermediate Algebra	3
MATH 113	Mathematical Reasoning & Modeling	3
MATH 114	Precalculus Algebra	3
MATH 119	Statistical Reasoning	3
TECH 101	Technical Math	3

Other General Education Requirements — 3 Hours

ECON 101	Principles of Macroeconomics	3
PHIL 102	Ethics	3

Program Requirements — 47 Hours

CAPP 125	Microcomputer Applications	3
CAPP 162	Desktop Publishing ^^	3
CIS 103	Introduction To Computer Sciences^^	3
CIS 124	Database Management^^	3
CIS 161	Systems Analysis^^	3
NET 101	Introduction to Networks^^	3
SS 120	Employment Strategies	1
WEB 103	Introduction to Web Development^^	3
WEB 104	Android Applications^^	3
WEB 114	Web Scripting^^	3
WEB 116	Web Development^^	3
WEB 118	Digital Imaging^^	3
WEB 119	Digital Illustration^^	3
WEB 120	XML^^	3
WEB 160	Portfolio Design^^	3
WEB 175	Web Development Internship^^	3

Program Electives — 6 Hours

CIS 120	Programming in Python^^	3
CIS 155	Programming in C#^^	3
CIS 157	Advanced C# with AI^^	3
CIS 158	JAVA^^	3
CIS 174	Programming in C# with SQL^^	3
COMM 161	Media Productions I^^	3
NET 102	Networking Essentials^^	3
NET 106	Introduction to Network Security^^	3
NET 120	Network Server^^	3
WEB 117	Advanced Web Development^^	3

^^*Courses to complete with a grade of C or higher*

Degree Total — 67 Hours

Associate of Applied Science in Construction Management Technology

The Construction Management Technology program can provide the knowledge and skills needed to begin a rewarding career in the construction industry. In this program, theory and practical courses are combined to lead to competencies needed to meet employers' needs. Graduates may work with businesses engaged in all areas of construction. The jobs are varied and challenging, including general contractors, construction management, materials suppliers, and employment with government agencies. Work environments range from permanent offices to job site offices. Studies of future workforce needs project a high demand for persons trained in construction technology. The program is accredited by the American Council for Construction Education (ACCE).

General Education Courses — 15 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I	3
ENGL 110	Communication for Business and Industry	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Mathematical Sciences — 3 Hours

MATH 114	Precalculus Algebra	3
TECH 101	Technical Math	3
MATH 112	Intermediate Algebra	3

Natural Sciences — 3 Hours

EASC 118	Environmental Geology	3
PHYS 211	Engineering Physics I with Lab	5
TECH 102	Applied Science	3

Program Requirements — 36 Hours

ACCT 101	Principles of Financial Accounting *or*	3
ACCT 109	Applied Accounting Procedures	
CAPP 125	Microcomputer Applications	3
CNST 105	Construction Materials and Methods^^	3
CNST 106	Construction Estimation^^	3
CNST 113	Construction Management^^	3
CNST 138	Construction Planning and Scheduling^^	3
CNST 142	Building Mechanical Systems^^	3
CNST 148	Construction Codes and Law^^	3
CNST 150	Building Layout and Surveying^^	3
CNST 160	Statics and Strength of Materials^^	3
CNST 262	Advanced Construction Safety^^	3
EDT 105	Print Reading for Construction^^	3

^^*Courses to complete with a grade of C or higher*

Program Electives — 9 Hours

CNST 175	Construction Management Internship	3
Choose any BADM course		
Choose any BSMT course		
Choose any EDT course		
Choose any HVAC course		
Choose any IEM course		
Choose any WELD course		

Degree Total — 60 Hours

Associate of Applied Science in Computer and Network Administration

The Computer and Network Administration program prepares students for a number of certifications, including A+, Network +, Security +CCNA, MCP, MCSA, or MCSE. Students work on current versions of software and hardware. The high demand for certified network administrators will continue to increase as software and hardware become more and more complex. Typical job titles for this degree are systems administrator, IT specialist, IT manager, LAN administrator, or network manager. Tasks associated with the job may include installation, configuration, and support of a local area network (LAN), a wide area network (WAN), and an Internet system or segment of the network. Students learn to maintain and monitor network hardware and software to ensure network availability to all system users.

General Education Courses — 15 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I	3
ENGL 110	Communication for Business and Industry	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Mathematical Sciences — 3 Hours

MATH 101	Business Math	3
TECH 101	Technical Math	3
Choose any course MATH 110 or higher		3

Other General Education Requirements — 3 Hours

ECON 101	Principles of Macroeconomics	3
ECON 102	Principles of Microeconomics	3
PHIL 102	Ethics	3

Program Requirements — 45 Hours

CAPP 125	Microcomputer Applications^^	3
CIS 103	Introduction To Computer Sciences^^	3
CIS 120	Programming in Python^^	3
NET 101	Introduction to Networks^^	3
NET 102	Networking Essentials^^	3
NET 103	Routing and Switching Essentials^^	3
NET 106	Introduction to Network Security^^	3
NET 120	Network Server^^	3
NET 126	Network Client^^	3
NET 135	SQL Server System Administration^^	3
NET 142	PC Operating Systems^^	3
NET 158	Network Firewalls^^	3
NET 175	Network Administration Internship^^	3
NET 203	Enterprise Networks, Security, & Automation^^	3
NET 222	Cloud Infrastructure and Directory Services^^	3

^^Courses to complete with a grade of C or higher

Degree Total — 60 Hours

Associate of Applied Science in Computer and Network Administration

The Criminal Justice program prepares students to enter the job market for various occupations in criminal justice, including but not limited to law enforcement and corrections. In addition, successful completion of the degree requirements prepares students to enter a law enforcement training academy for Missouri police officers.

The Associate of Arts degree is designed for students seeking to continue their education at a four-year college or university.

The education of a criminal justice student requires assimilation of knowledge and acquisition of skills through practical experiences and classroom participation. Essential skills and capabilities needed will vary with the demand of the job to be performed.

Students may receive college credit for past basic law enforcement academy/corrections training. Please contact the program coordinator for more information.

Students are also required to complete the NOCTI exam in the area of Criminal Justice during their final semester.

Note: People with felony convictions may have difficulty securing employment in the criminal justice field.

General Education Courses — 18 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I	3
ENGL 110	Communication for Business and Industry	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Mathematical Sciences — 3 Hours

MATH 101	Business Math	3
Choose any course MATH 110 or higher		3

Other General Education Requirements — 6 Hours

PSY 101	General Psychology	3
SOC 100	General Sociology	3

Program Requirements — 42 Hours

CJ 101	Introduction to Law Enforcement	3
CJ 102	Introduction to Criminal Justice	3
CJ 103	Traffic Safety and Investigation	3
CJ 105	Criminal Law	3
CJ 107	Criminology	3
CJ 109	Juvenile Delinquency	3
CJ 111	Introduction to Corrections	3
CJ 115	Procedural Law	3
CJ 118	Criminal Justice Communications	3
CJ 120	Probation and Parole	3
CJ 124	Drugs, Society and Criminal Justice	3
CJ 131	Criminal Investigation I	3
CJ 132	Criminal Investigation II	3
CJ 175	Supervised Occupational Experience in Criminal Justice	3

Degree Total — 60 Hours

Associate of Applied Science in Dental Hygiene

Dental hygienists are the only member of the dental health team licensed to provide direct care to the patient, other than the dentist. The dental hygienist works under the supervision of the dentist by performing duties delegated by the dentist in accordance with the Missouri Dental Practice Act. They work directly with patients to help them care for their oral health. Duties include cleanings, administering local anesthesia and nitrous oxide analgesia, exposing x-rays, providing oral health care instructions and education to patients, and maintaining patient records. Students receive clinical experiences in the SFCC Dental Hygiene Clinic and other selected agencies.

About the Program

Through classroom theory, laboratory practice and clinical application, students are provided comprehensive learning experiences that prepare them to secure an entry-level position as a licensed dental hygienist in oral health care. The Dental Hygiene degree program fosters clinical problem solving and critical-thinking skills and provides students with classroom and experiential educational foundation to promote lifelong learning.

Upon completion of the program, students are eligible to take the required exams necessary for licensure. These include the National Board Dental Hygiene Examination (NDHBE), a regional clinical exam (CRDTS) and the Missouri Jurisprudence exam. Individual results of these exams are based upon the student's performance. SFCC does not guarantee passage of licensure exams.

Admission Process

Admission to the dental hygiene program at SFCC is competitive and requires an additional admission application following admission to the college. An information/application packet is available online at www.sfccmo.edu/dental-hygiene or by request from Student Services at the Sedalia campus. This packet contains the essential qualifications and admission requirements, fee schedule, program mission and philosophy, sequencing of courses, an application form and other pertinent information. Successful program applicants are subject to background checks and drug tests that could prevent an applicant's progression in the program. The program accepts 10 first-year students each fall. An applicant must have successfully completed all prerequisites for the Dental Hygiene program by the end of the spring semester before the fall they wish to enter. State Fair Community College does accept transfer courses from other colleges but an applicant would be advised to have their transcript evaluated before assuming transfer of credits.

The SFCC Dental Hygiene program has been accredited by the Commission on Dental Accreditation since 2005.

Associate of Applied Science in Dental Hygiene (Continued)

Program Prerequisites — 19 Hours

Natural Sciences — 16 Hours

BIO 221	Microbiology^	4
BIO 207	Human Anatomy with Lab^	4
BIO 208	Human Physiology with Lab^	4
CHEM 101	Introduction to Chemistry with Lab^	4

Mathematical Sciences — 3 Hours

MATH 101	Business Math^^	3
MATH 110	Intermediate Algebra with Review^^	5
MATH 112	Intermediate Algebra^^	3
MATH 113	Mathematical Reasoning & Modeling^'	3
MATH 114	Precalculus Algebra^^	3
MATH 119	Statistical Reasoning^^	3
MATH 120	Precalculus Trigonometry^^	3
MATH 210	Calculus and Analytic Geometry I^^	5
TECH 101	Applied Math^^	3

General Education Requirements — 9 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I^^*	3
ENGL 102	English Composition II^^*	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication^^*	3
COMM 101	Public Speaking^^*	3
COMM 103	Small Group Communication^^*	3
COMM 105	Interpersonal Communication^^*	3
COMM 190	Argumentation and Debate^^*	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877^^*	3
HIST 102	U.S. History Since 1877^^*	3
POLS 101	American/National Government^^*	3

Social and Behavioral Sciences — 6 Hours

PSY 101	General Psychology^^*	3
PSY 210	Lifespan Development^^*	3
SOC 100	General Sociology^^*	3
SOC 101	Social Problems^^*	3
SOC 102	Marriage and Family^^*	3
SOC 110	Media, Culture, & Society^^*	3
SOC 120	American Diversity^^*	3

Program Requirements — 57 Hours

DH 102	Dental Radiography^	2
DH 104	Dental Radiography Lab^	1
DH 106	Dental Clinical Emergencies^	1
DH 108	Oral Anatomy and Histology^	3
DH 111	Pharmacology^	3
DH 113	Dental Hygiene Ethics and Legal Issues^	1
DH 115	Community Dental Health I^	2
DH 117	Community Dental Health II^	0.5
DH 118	Principles of Periodontics^	2
DH 120	Dental Biomaterials with Lab^	2
DH 122	General and Oral Pathology^	3
DH 124	Applied Nutrition and Oral Health Education^	2
DH 128	Local Anesthesia^	2
DH 131	Introduction to Dental Hygiene Theory^	2
DH 133	Dental Hygiene Theory I^	2
DH 134	Dental Hygiene Theory II^	1
DH 135	Dental Hygiene Theory III^	2
DH 136	Dental Hygiene Theory IV^	2
DH 139	Dental Hygiene Clinic I^	4
DH 140	Dental Hygiene Pre-Clinic I^	4
DH 143	Dental Hygiene Clinic II^	3
DH 144	Dental Hygiene Clinic III^	6
DH 145	Dental Hygiene Clinic IV^	6
HEOC 135	Allied Health Career Development^	0.5

^Courses to complete with a grade of b or higher

^^Courses to complete with a grade of C or higher

Degree Total — 91 Hours

Associate of Applied Science in Digital Media Communications

The Digital Media Communications program builds skills in mass communication, graphic design, journalism, marketing, and public relations within the realm of new technologies including blogs, podcasts, video production, websites, and social media platforms.

General Education Courses — 21 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I^^	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication^^	3
COMM 101	Public Speaking^^	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

POLS 101	American/National Government^^	3

Mathematical Sciences — 3 Hours

MATH 119	Statistical Reasoning^^	3

Other General Education Requirements — 9 Hours

ART 160	Introduction to Graphic Design^^	3
COMM 110	Introduction to Media & AI Literacy^^	3
COMM 161	Media Productions I^^	3

^^Courses to complete with a grade of C or higher

Program Requirements — 36 Hours

ART 162	Digital Photography^^	3
ART 165	Web Authoring and Graphic Tools^^	3
BSMT 106	Principles of Marketing^^	3
BSMT 122	Digital Marketing Essentials^^	3
COMM 112	Introduction to Public Relations^^	3
COMM 114	News Reporting I^^	3
COMM 201	Writing Across the Media^^	3
COMM 215	Introduction to Social Media Management^^	3
COMM 220	Digital Media Communications Internship^^	6
WEB 116	Web Development^^	3
WEB 118	Digital Imaging^^	3

Program Electives — 3 Hours

ART 103	Design I^^	3
ART 112	Drawing I^^	3
BADM 101	Introduction to Business^^	3
BSMT 110	Salesmanship^^	3
COMM 105	Interpersonal Communication^^	3
COMM 162	Media Productions II^^	3
COMM 163	Digital Video Editing^^	3
COMM 164	Digital Storytelling^^	3
COMM 165	Graphics for Video^^	3
WEB 114	Web Scripting^^	3
WEB 117	Advanced Web Development^^	3
WEB 119	Digital Illustration^^	3

Degree Total — 60 Hours

Associate of Applied Science in Early Childhood Development

The Early Childhood Development program prepares graduates to enter the child care field at several levels. Graduates from the program will be prepared to manage an in-home child care facility, teach in an early childhood classroom or be a director for an early childhood center. This program offers various forms of classroom options (hybrid, online and on ground) to enable students who are employed in the field to complete a degree and increase their opportunities for advancement. Graduates must be physically able and willing to participate in all children's activities.

Students can apply for The Child Development Associate (CDA) Credential after completing ECD 101, ECD 107, ECD 127, and ECD 131.

Other Requirements

A successful background check included in EDUC 108 is required in this program. This requirement is included in and will be met once students successfully complete EDUC 108. This course must be successfully completed prior to taking most ECD or EDUC courses.

General Education Courses — 15 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I	3

Oral Communications — 3 Hours

COMM 101	Public Speaking	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Mathematical Sciences — 3 Hours

MATH 101	Business Math	3
MATH 110	Intermediate Algebra with Review	5
MATH 112	Intermediate Algebra	3
MATH 113	Mathematical Reasoning and Modeling	3
MATH 114	Precalculus Algebra	3

Other General Education Requirements — 3 Hours

SOC 102	American Diversity	3

Program Requirements — 42.5 Hours

ECD 101	Introduction to Early Childhood^^	3
ECD 103	Child Growth and Development^^	3
ECD 107	Child Nutrition, Health and Safety^^	3
ECD 109	Observation and Planning Assessment^^	3
ECD 111	Language Development Early Literacy^^	3
ECD 115	Child Social/Emotional Development^^	3
ECD 117	Creative Expression and Play^^	3
ECD 121	Curriculum Strategies for Early Childhood^^	3
ECD 125	Introduction to Special Individuals & Sensory Integration^^	3
ECD 127	Parent/Teacher Interaction^^	3
ECD 129	Administration in Early Childhood Care^^	3
ECD 175	Child Care Practicum^^	3
EDUC 108	Introduction to the Field of Education	0.5
EDUC 212	Educational Technology^^	3
PSY 102	Child Psychology	3

Program Electives — 3 Hours

BSMT 125	Human Relations	3
ECD 131	Child Development Portfolio/Assessment Preparation^^	3
EDUC 205	Teaching Profession with Field Experience^^	3

^^*Courses to complete with a grade of C or higher*

Degree Total — 60.5 Hours

Associate of Applied Science in Engineering Design Technology

The Engineering Design Technology program will provide necessary skills and knowledge to obtain employment in the growing, high-demand engineering design field as a designer/drafter in a manufacturing, civil, structural, or architectural environment. The outlook for competent designers is expected to increase faster than average since all new products and buildings require designs and specifications to manufacture, build and assemble. The application of drafting and design standards and skills will be examined with the study of basic to advanced concepts in popular engineering design programs.

General Education Courses — 18 Hours

Written Communications — 6 Hours

ENGL 101	English Composition I	3
ENGL 102	English Composition II	3
ENGL 110	Communication for Business & Industry	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3
COMM 105	Interpersonal Communication	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Mathematical Sciences — 3 Hours

MATH 114	Precalculus Algebra	3
TECH 101	Technical Math	3

Natural Sciences — 3 Hours

PHYS 110	Survey of Physics with Lab	5
TECH 102	Applied Science	3

Program Requirements — 35 Hours

CAPP 125	Microcomputer Applications	3
EDT 105	Print Reading for Construction	3
EDT 111	Introduction to Engineering Design	3
EDT 115	Advanced Engineering Design	3
EDT 120	Architectural Design	3
EDT 125	Architectural Applications	3
EDT 130	Manufacturing Design I	3
EDT 132	Manufacturing Design II	3
EDT 140	Engineering Design for Industry	3
EDT 175	EDT Internship	4
EDT 190	EDT Capstone	3
SS 120	Employment Strategies	1

Program Electives — 9 Hours

EDT 180	Problems in EDT	3
Choose any CNST course		
Choose any IEM course		
Choose any MACH course		
Choose any WELD course		

Degree Total — 62 Hours

Associate of Applied Science in Fire Science

The Fire Science program assists students to enter an exciting career as firefighters or seek promotion, All fire specific courses are taught by experienced firefighters and offer the opportunity for current firefighters to upgrade job skills or prepare themselves as supervisors in their departments. It also prepares students who wish to begin a career in firefighting. Students will also need to complete the appropriate required licensure for their state of residency in many cases to gain employment in fire science aside from this degree.

The Fire Science program offers two tracks of study, a complete two-year associate of applied science degree and a shorter 30 credit hour professional certificate.

Students may receive college credit for current fire service employees based on work experience and prior training. Please contact the program coordinator for more information.

General Education Courses		15 Hours
Written Communications		**3 Hours**
ENGL 101	English Composition I	3
Oral Communications		**3 Hours**
COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3
Civics		**3 Hours**
Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).		
POLS 101	American/National Government	3
Mathematical Sciences		**3 Hours**
MATH 101	Business Math	3
Choose any course MATH 110 or higher		
Other General Education Requirements		**3 Hours**
CHEM 101	Introduction to Chemistry with Lab	4
PHIL 102	Ethics	3
PSY 101	General Psychology	3
SOC 100	General Sociology	3

Program Requirements		45 Hours
FIRE 132	Introduction to Emergency Services	3
FIRE 133	Fire Behavior and Combustion	3
FIRE 134	Fire Prevention	3
FIRE 135	Fire Safety and Survival	3
FIRE 136	Building Construction for Fire	3
FIRE 137	Fire Protection Systems	3
FIRE 138	Fire Investigations	3
FIRE 139	Tactics and Strategies	3
FIRE 141	Fire Leadership	3
FIRE 142	Introduction to Hazardous Materials	3
FIRE 143	Introduction to Emergency Management	3
FIRE 144	Fire Service Administration	3
FIRE 145	Fire Codes and Inspection Principles	3
FIRE 146	Legal Considerations for Emergency Services	3
FIRE 147	Political Sciences for Emergency Services	3

Degree Total	60 Hours

Associate of Applied Science in Health Information Technology

The Health Information Technology (HIT) program will give students the education needed for greater success in their new chosen profession. The value in completing the HIT degree is eligibility to take the national credentialing exam for registered health information technicians. Other benefits for the student are to improve earning potential; open doors for career advancement; reach short-term goals and focus on long-term goals; achieve a foundation of broad and deep understanding of the health information management field; be associated with The American Health Information Management Association's (AHIMA) strong and longstanding reputation of excellence, and connect with a strong network of AHIMA-certified peers.

AHIMA-certified professionals pass a rigorous exam and commit to ongoing continuation of their education. When a student seeks certification, it shows an employer a deep personal commitment and sense of accountability, as well as credibility and confidence in an individual's professional knowledge. A student who carries AHIMA credentials will agree to abide by the AHIMA Code of Ethics that will improve the quality of information and care the patient receives.

Registered HITs may be employed in any organization that uses patient data or health information, such as pharmaceutical companies, law and insurance firms, and health product vendors. Most RHITs work in hospitals but can also be employed in other health care settings including physician practices, nursing homes, home health agencies, and public health agencies.

Once a student has achieved the AAS in Health Information Technology degree, he or she can further enhance skills, open the door to even greater opportunities, and obtain a higher level of education by enrolling in a baccalaureate program for Health Information Administration.

SFCC's HIT program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

General Education Courses — 12 Hours

Oral Communications — 3 Hours

COMM 101	Public Speaking	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

POLS 101	American/National Government	3

Mathematical Sciences — 3 Hours

MATH 119	Statistical Reasoning^^	3

Natural Sciences — 3 Hours

BIO 103	Human Biology^^	3
BIO 112	Principles of Biology with Lab	4
BIO 125	General Biology with Lab	4

^^*Courses to complete with a grade of C or higher*

Program Requirements — 45.5 Hours

CIS 124	Database Management^^	3
HEOC 119	Medical Terminology^^	3
HEOC 135	Allied Health Career Development^^	0.5
HIT 100	Introduction to Health Information Technology^^	3
HIT 105	Health Care Technologies^^	3
HIT 200	Health Care Statistics and Data Analysis^^	3
HIT 204	Coding I^^	3
HIT 206	Coding II^^	3
HIT 208	Coding III^^	3
HIT 212	Project Management for Health Information^^	3
HIT 215	Principles of Health Care Reimbursement^^	3
HIT 220	Health Information Management^^	3
HIT 224	Human Disease and Conditions^^	3
HIT 230	Introduction to Healthcare Informatics^^	3
HIT 275	Professional Practice Experience^^	3

Program Electives — 3 Hours

HIT 216	Auditing Outpatient Coding^^	2
HIT 217	Health Data Literacy^^	1
HIT 218	Clinical Documentation Improvement^^	1
HIT 219	Release of Information^^	1
HIT 221	Healthcare Privacy and Security^^	2

Degree Total — 60.5 Hours

Associate of Applied Science in Agriculture with Emphasis in Horticulture

The Horticulture program will prepare students for numerous career opportunities with practical experience in a fully equipped greenhouse and an internship to enhance the classroom learning experiences. Workers in landscaping, groundskeeping, nursery, greenhouse, and lawn service occupations are responsible for a variety of tasks necessary to achieve a pleasant and functional outdoor environment. They also care for indoor gardens and planting in commercial and public facilities. Nursery and greenhouse workers help cultivate plants. Managers make decisions about type and quantity of plants to be grown; purchase seed, fertilizers, and chemicals; hire employees; manage record keeping and marketing, and oversee operations. Landscape contractors usually follow designs of a landscape architect to install trees, shrubs, sod, and ornamental features. Groundskeepers maintain a variety of facilities including athletic fields, golf courses, cemeteries, college campuses, and parks.

General Education Courses — 16 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I	3
ENGL 110	Communication for Business and Industry	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3
COMM 190	Argumentation and Debate	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Mathematical Sciences — 3 Hours

MATH 101	Business Math	3
Choose any course MATH 110 or higher		3
TECH 101	Technical Math	3

Sciences — 4 Hours

AGRI 119	Soils I with Lab	4

Program Requirements — 41 Hours

AGRI 107	Foundations of Agriculture	3
AGRI 118	Introduction to Crop Science	3
AGRI 121	Soils II	3
AGRI 125	Natural Resources	3
AGRI 126	Ornamental Woody Plants ***or***	3
AGRI 128	Ornamental Herbaceous Plants	
AGRI 127	Farm Chemicals	3
AGRI 129	General Horticulture	3
AGRI 131	Introduction to Agribusiness Systems	3
AGRI 138	Ag Business Management	3
AGRI 151	Turf and Landscape Management	3
AGRI 154	Greenhouse Management with Lab	3
AGRI 168	Commercial Applicator Licensing	2
AGRI 175	Occupational Internship	3
CAPP 125	Microcomputer Applications	3

Program Electives — 3 Hours

Choose any AGRI course
Choose any AGME course
Choose any BADM course
Choose any BSMT course
Choose any CDL course
Choose any CNST course
Choose any EDT course
Choose any IEM course
Choose any WELD course

Degree Total — 60 Hours

Associate of Applied Science in Heating, Ventilation, Air Conditioning, Refrigeration, and Controls Technology

The Heating, Ventilation, Air Conditioning, Refrigeration, and Controls Technology program was designed to equip students with the valuable knowledge and hands-on skills needed to obtain a remarkable start to a fulfilling career. This program is comprised of the basic elements of refrigeration and the latest of energy controls technologies, in order to develop a technician who can demonstrate the competencies that are vastly needed in an expanding industry.

Graduates will be able to choose between numerous careers in the residential and commercial HVAC/R industries.

Students should be able to lift 45 pounds, bend, stoop, crawl, kneel, climb ladders, work in awkward and tight spaces, and know the awareness and discipline of good safety habits.

General Education Courses — 15 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I	3
ENGL 110	Communication for Business and Industry	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3
COMM 105	Interpersonal Communication	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Mathematical Sciences — 3 Hours

TECH 101	Technical Math^^	3
MATH 112	Intermediate Algebra^^	3

Sciences — 3 Hours

PHYS 211	Engineering Physics I with Lab	5
TECH 102	Applied Science	3

Program Requirements — 45 Hours

CNST 162	Construction Safety ***OR***	3
CNST 262	Advanced Construction Safety	
HVAC 102	HVAC Fundamentals I^^	3
HVAC 104	HVAC Fundamentals II^^	3
HVAC 106	HVAC Schematics	2
HVAC 108	HVAC Motors & Components	3
HVAC 110	Refrigeration & Diagnostics	3
HVAC 112	Basics in HVAC Electrical^^	3
HVAC 120	Heating Systems	3
HVAC 130	Air Flow Fundamentals	3
HVAC 132	HVAC Installation and Evaluation	3
HVAC 134	Heat Pumps	2
HVAC 136	EPA 608	1
HVAC 140	Commercial Air Conditioning	2
HVAC 160	HVAC Automation Systems	3
HVAC 175	HVAC Internship	4
IEM 102	Electric Fundamentals^^	3
SS 120	Employment Strategies	1

^^Courses to complete with a grade of C or higher

Degree Total — 60 Hours

Associate of Applied Science in Industrial Technology with Emphasis in Electrical Maintenance

The Industrial Technology with Emphasis in Electrical Maintenance program is designed to prepare students as electrical and maintenance technologists or millwrights for employment in commercial, production, manufacturing, and other industrial settings. Inclusion of all major maintenance disciplines results in a comprehensive knowledge and skill base. Competency is gained in interpreting and utilizing electrical and fluid power schematics for troubleshooting; performing general wiring tasks in accordance with the National Electrical Code, and programming, troubleshooting and converting machinery to programmable logic control. The physical requirements of this occupation typically include lifting up to 45 pounds, pushing, pulling, reaching, walking, standing, crawling, kneeling, ascending and descending ladders, manual dexterity, and working in cramped positions for sustained periods of time.

General Education Courses — 15 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I	3
ENGL 110	Communication for Business and Industry	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Mathematical Sciences — 3 Hours

TECH 101	Technical Math^^	3
Choose any course MATH 110 or higher		3

Sciences — 3 Hours

PHYS 110	Survey of Physics with Lab	5
PHYS 211	Engineering Physics I with Lab	5
TECH 102	Applied Science	3

^^*Courses to complete with a grade of C or higher*

Program Requirements — 36 Hours

IEM 102	Electric Fundamentals^^	3
IEM 104	Electrical Power^^	3
IEM 106	Industrial Mechanics^^	3
IEM 108	Fluid Power Technology^^	3
IEM 112	Control Circuit Troubleshooting^^	3
IEM 114	Motor Controls^^	3
IEM 122	Introduction to PLCs^^	3
IEM 124	Intermediate PLCs^^	3
IEM 136	General NEC Requirements^^	3
IEM 138	Power Distribution and Switchgear^^	3
IEM 140	Transformers and Motors^^	3
IEM 175	IEM Internship	3

Program Electives — 9 Hours

Robotics and Automation Group

IEM 107	Introduction to Robotics	3
IEM 109	Robotics Automation Technician I	3
IEM 132	Advanced PLCs	3
IEM 134	PLC Networks	3

Safety and Management Group

IEM 126	Industrial Safety	3
IEM 128	Maintenance Management	3

Additional Options

Choose any additional IEM course
Choose any CNST course
Choose any MACH course
Choose any NETcourse
Choose any TECH course
Choose any WELD course

Degree Total — 60 Hours

Associate of Applied Science in Medical Assisting

The student interested in an Associate of Applied Science in Medical Assisting will first complete the requirements for the Professional Certificate in Medical Assisting and pass the certification exam in Medical Assisting prior to completion of the rest of the Associate of Applied Science requirements.

General Education Courses — 18 Hours

Oral Communications — 3 Hours

COMM 101	Public Speaking^^	3

Written Communications — 3 Hours

ENGL 101	English Composition I^^	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877^^	3
HIST 102	U.S. History Since 1877^^	3
POLS 101	American/National Government^^	3

Mathematical Sciences — 3 Hours

MATH 110	Intermediate Algebra with Review^^	5
MATH 112	Intermediate Algebra^^	3

Other General Education Requirements — 6 Hours

PSY 101	General Psychology^^	3
SOC 100	General Sociology^^	3

Program Requirements — 43 Hours

CAPP 125	Microcomputer Applications^^	3
HEOC 119	Medical Terminology^^	3
HEOC 135	Allied Health Career Development^^	0.5
HIT 105	Health Care Technologies^^	3
HIT 224	Human Disease and Conditions^^	3
MEA 101	Introduction to Medical Assisting^	3
MEA 103	Exploration of the Human Body^^	3
MEA 108	Medical Assisting Administrative Procedures^	3
MEA 109	Pharmacology Basics^^	3
MEA 110	Medical Scribe^^	2
MEA 112	Medical Assisting Clinical Procedures^	3
MEA 114	Medical Assisting Advanced Skills^	4
MEA 116	Medical Assisting Laboratory Procedures^	3
MEA 190	Medical Assisting Capstone^	6
NURS 102	CPR for Health Care Providers	0.5

^Courses to complete with a grade of B or higher

^^Courses to complete with a grade of C or higher

Degree Total — **61 Hours**

Associate of Applied Science in Manufacturing Technology with Emphasis in Welding Technology

The Manufacturing Technology with Emphasis in Welding Technology program is designed for the individual who wants to learn the millwright trade, fabrication/shop management or quality control/quality assurance. The program is a combination of the welding and machine tool programs, and the successful student will have the skills and knowledge to become part of today's workforce.

Students should be able to concentrate on detailed work for long periods and must be able to lift up to 45 pounds, bend, stoop, crawl, kneel, climb ladders, and work in awkward and cramped positions.

All students should be aware welding fumes produce a chemical known to the state of California to cause cancer and birth defects (or other reproductive harm). Students should review the Material Data Safety Sheets (MSDS) available in the welding department located in the Fielding Technical Center, Room 270, to be aware of the hazards of welding fumes.

General Education Courses — 15 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I	3
ENGL 110	Communication for Business and Industry	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3
COMM 105	Interpersonal Communication	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Mathematical Sciences — 3 Hours

TECH 101	Technical Math	3
Choose any course MATH 110 or higher		3

Sciences — 3 Hours

PHYS 110	Survey of Physics with Lab	5
TECH 102	Applied Science	3

^^*Courses to complete with a grade of C or higher*

Program Requirements — 38 Hours

CNST 262	Advanced Construction Safety	3
WELD 114	Structural Layout and Fabrication^^	3
WELD 116	Print Reading for Welders^^	3
WELD 120	Shielded Metal Arc Welding I^^	3
WELD 122	Shielded Metal Arc Welding II - Structural^^	3
WELD 124	Shielded Metal Arc Welding III - Pipe^^	4
WELD 126	Gas Metal/Flux Core Arc Welding I^^	3
WELD 128	Gas Metal/Flux Core Arc Welding II - Structural^^	3
WELD 132	Gas Tungsten Arc Welding I^^	2
WELD 134	Gas Tungsten Arc Welding II^^	3
WELD 136	Gas Tungsten Arc Welding III^^	4
WELD 160	Advanced Pipe Fitting and Structural Fabrication^^	4

Program Electives — 7 Hours

Agriculture/Mechanics Electives

Choose any AGRI course
Choose any AGME course
Choose any MECH course

Business Electives

ACCT 109	Applied Accounting Procedures	3
BADM 101	Introduction to Business	3
BSMT 108	Principles of Management	3
BSMT 119	Customer Service Management	3
BSMT 122	Digital Marketing Essentials	3
CAPP 125	Microcomputer Applications	3

Additional Options

Choose any CNST course
Choose any EDT course
Choose any IEM course
Choose any MACH course
Choose any addtional WELD course

Degree Total — 60 Hours

Associate of Applied Science in Medical Laboratory Technician

The Missouri Health Professions Consortium (MHPC) Medical Laboratory Technician (MLT) Program curriculum includes on-campus or virtual classroom instruction, on-campus laboratory instruction and an off-campus clinical rotation component encompassing the areas of Hematology and Coagulation, Clinical Microbiology, Parasitology, Mycology and Virology, Immunohematology, Clinical Chemistry and Urinalysis, Immunology and Phlebotomy.

The MHPC MLT program is nationally accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) and upon completion of the program, the graduate will be eligible to sit for a national certification examination such as that offered by the American Society for Clinical Pathology (ASCP). Upon passing the exam, graduates will be recognized nationally as Medical Laboratory Technicians. Graduates of the program will have experience in and be qualified to provide laboratory services to patients in many different health care settings, including, but not limited to, hospitals, clinics and physician offices.

An information/application packet can be found online at www.sfccmo.edu/academics-programs/areas-of-study/medicallaboratory-technician/. MLT courses must be completed with at least a C or 78% while also maintaining an overall minimum 2.5 GPA or higher in order to progress to the MLT coursework of the next semester.

Program Prerequisites — 27 Hours

Oral Communications — 3 Hours

COMM 101	Public Speaking^^	3

Written Communications — 3 Hours

ENGL 101	English Composition I^^	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877^^	3
HIST 102	U.S. History Since 1877^^	3
POLS 101	American/National Government^^	3

Mathematical Sciences — 3 Hours

MATH 114	Precalculus Algebra^^	3

Natural Sciences — 12 Hours

BIO 207	Human Anatomy with Lab^	4
BIO 208	Human Physiology with Lab^	4
CHEM 101	Introduction to Chemistry with Lab^^ ***OR***	4-5
CHEM 123	General Chemistry I with Lab^^	

Other General Education Requirements — 3 Hours

PHIL 102	Ethics^^	3
SOC 100	General Sociology^^	3

Program Requirements — 35 Hours

MLT 150	Introduction to Lab Science Methods	2
MLT 210	Immunology	3
MLT 220	Clinical Chemistry and Urinalysis	5
MLT 250	Hematology and Coagulation	5
MLT 260	Phlebotomy	2
MLT 270	Immunohematology	5
MLT 280	Clinical Microbiology	4
MLT 290	Parasitology, Mycology and Virology	1
MLT 291	Hematology and Coagulation Practicum	2
MLT 292	Clinical Chemistry Practicum	2
MLT 293	Clinical Microbiology Practicum	2
MLT 294	Clinical Immunohematology Practicum	2

^^Courses to complete with a grade of C or higher

Degree Total — 62 Hours

Associate of Applied Science in Health Care Specialist with Emphasis in Nurse Aide

The Health Care Specialist with emphasis in Nurse Aide program includes all the courses from the Professional Certificate in Nurse Aide. Graduates of this program will have the skills necessary to work in all capacities of a long-term care facility.

General Education Requirements — 26 Hours

Oral Communications — 3 Hours

COMM 101	Public Speaking	3

Written Communications — 3 Hours

ENGL 101	English Composition I	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Mathematical Sciences — 3 Hours

MATH 110	Intermediate Algebra with Review^^	5
MATH 112	Intermediate Algebra^^	3

Natural Sciences — 11 Hours

BIO 103	Human Biology	3
BIO 207	Human Anatomy with Lab^^	4
BIO 208	Human Physiology with Lab	4

Other General Education Requirements — 3 Hours

PSY 101	General Psychology	3

Program Requirements — 35.5 Hours

BHS 200	Introduction to Behavioral Health Support	3
BIO 221	Microbiology	4
CAPP 125	Microcomputer Applications^^	3
HEOC 119	Medical Terminology^^	3
HEOC 152	Certified Nurse Assistant^^	6
HEOC 155	Certified Nurse Assistant Clinical	2
HEOC 158	Certified Medication Technician^^	4
HEOC 160	Certified Medication Technician Clinical	1
HIT 100	Introduction to Health Information Technology	3
HIT 105	Health Care Technologies	3
NURS 102	CPR for Health Care Providers	0.5
SS 104	College Skills	3

^^Courses to complete with a grade of C or higher

Degree Total — 61.5 Hours

Associate of Applied Science in Nursing

The Health Care Specialist with emphasis in Nurse Aide program includes all the courses from the Professional Certificate in Nurse Aide. Graduates of this program will have the skills necessary to work in all capacities of a long-term care facility.

Year Two (Level 2) Advanced Placement

All science courses must have been completed within the last 10 years at the time of application to the Nursing program.

Program Prerequisites — 13 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I^^	3
ENGL 102	English Composition II^^	3

Mathematical Sciences — 3 Hours

MATH 110	Intermediate Algebra with Review^^	5
MATH 112	Intermediate Algebra^^	3
MATH 113	Mathematical Reasoning and Modeling^^	3
MATH 114	Precalculus Algebra^^	3
MATH 119	Statistical Reasoning^^	3

Natural Sciences — 4 Hours

BIO 208	Human Physiology with Lab^	4

Other Program Prerequisites — 3 Hours

PSY 101	General Psychology^^	3

Year Two (Level 2) Courses required after acceptance for students not bridging directly from Year One (Level 1)

HEOC 135	Allied Health Career Development^	0.5

(required for advance placement students with PN transcripts from outside Missouri and Paramedics)

NURS 210	Nursing Transition Course^	2

(required for advanced placement LPN's only)

NURS 211	Paramedic Transition Course	4

(required for advanced placement Paramedics only)

^Courses to complete with a grade of B or higher

^^Courses to complete with a grade of C or higher

**Courses can be completed prior to the start of the program*

***Advanced Placement credits for LPNs and Licensed Paramedics*

Program Requirements — 47.5 Hours

Each eight-week session of nursing must be successfully completed to take the next eight-week courses.

**Nursing Competencies		12
HEOC 135	Allied Health Career Development^	0.5

Oral Communications — 3 Hours

COMM 100	Introduction to Communication^^*	3
COMM 101	Public Speaking^^*	3
COMM 103	Small Group Communication^^*	3
COMM 105	Interpersonal Communication^^*	3
COMM 190	Argumentation and Debate^^*	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877^^*	3
HIST 102	U.S. History Since 1877^^*	3
POLS 101	American/National Government^^*	3
NURS 102	CPR for Health Care Providers	0.5
NURS 213	Introduction to Professional Nursing^	2
NURS 215	Complex Health: Mental Health^	2.5
NURS 216	Complex Health: Mental Health Clinical	1
NURS 219	Complex Health: Elimination^	3
NURS 221	Complex Health: Nutrition/Metabolic^	2.5
NURS 225	Complex Health: Maternal/Newborn	1.5
NURS 228	Complex Health: Family Clinical	1
NURS 229	Complex Health: Pediatrics	1.5
NURS 230	Complex Health: Adult Clinical I^	1
NURS 231	Complex Health: Adult Clinical II	1
NURS 233	Complex Health: Adult Clinical III	3
NURS 234	Complex Health: Activity and Rest^	3
NURS 237	Complex Health: Cognitive/Perceptual^	3
NURS 243	Professional Nursing Capstone Clinical	2.5

Degree Total — 60.5 Hours

29

Associate of Applied Science in Occupational Therapy Assistant

The Occupational Therapy Assistant program is a one-plus degree program that prepares students to practice as Certified Occupational Therapy Assistants (COTA) after meeting certification and state licensure standards. State Fair Community College (SFCC) is one of five colleges in Missouri Health Professions Consortium (MHPC) currently offering this program. SFCC offers and enrolls students in the general education coursework: sophomore level (professional level) coursework typically originates from a classroom at any of the five campuses and is conveyed to students via interactive television and internet-based technology. The OTA program is a hybrid program. Through the combination of general education and professional level coursework, classroom and laboratory practice, and clinical fieldwork experiences, students will learn the profession of occupational therapy assistants. The professional year does not run on a traditional SFCC academic cycle. Classes begin in the fall semester and will run until the next fall semester of the following year. Completion of professional course work takes one full year.

Accreditation

The MHPC Occupational Therapy Assistant Program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA). Following successful completion of coursework and passing of the certification exam, individuals will be a Certified Occupational Therapy Assistant (COTA). Even with successful coursework completion students may be prohibited from sitting for the NBCOT Certification Exam if they have a felony conviction. In Missouri, state licensure is required in order to practice and acquisition of a license is contingent upon passing the NBCOT Certification Exam. For more information regarding accreditation, please contact the American Occupational Therapy Association:

ACOTE
c/o Accreditation Department
American Occupational Therapy Association (AOTA)
7501 Wisconsin Ave, Suite 510E
Bethesda, MD 20814
(301) 652-2682 | TDD (800) 377-8555
accred@aota.org www.acoteonline.org

Admission Process

Enrollment in the MHPC Occupational Therapy Assistant program is selective and an informational packet with application materials is available online (www.sfccmo.edu/occupational-therapy-assistant) or at the Sedalia campus. Students must complete all general education coursework PRIOR to entry into the professional level program. However, students can complete coursework in the semester prior to the start of the program; under these circumstances, program admission would be contingent upon successful completion of general education prerequisite coursework and maintenance of the required 2.5 GPA. Transcript evidence of satisfactory completion of general education/prerequisite coursework must be received with the application packet. SFCC may not be able to offer admission to all qualified applicants. Only students meeting all admission criteria and submitting completed application packets within the established timeframe will be considered. The Selection Committee meetings are conducted the spring before the start of the professional year. Admission decisions of the Selection Committee are final. Applicants will receive a letter regarding admissions status following committee review.

Associate of Applied Science in Occupational Therapy Assistant (continued)

Program Prerequisites		32 Hours
Oral Communications		**3 Hours**
COMM 101	Public Speaking	3
Written Communications		**3 Hours**
ENGL 101	English Composition I^^	3
Civics		**3 Hours**
Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).		
HIST 101	U.S. History Before 1877^^*	3
HIST 102	U.S. History Since 1877^^*	3
POLS 101	American/National Government^^*	3
Mathematical Sciences		**3 Hours**
MATH 110	Intermediate Algebra with Review^^	5
MATH 112	Intermediate Algebra^^	3
MATH 113	Mathematical Reasoning and Modeling^^	3
MATH 114	Precalculus Algebra^^	3
MATH 119	Statistical Reasoning^^	3
Natural Sciences		**8 Hours**
BIO 207	Human Anatomy with Lab^^	4
BIO 208	Human Physiology with Lab^	4
Other Program Prerequisites		**12 Hours**
HEOC 119	Medical Terminology^^	3
PSY 101	General Psychology^^	3
PSY 210	Lifespan Development ^^	3
SOC 100	General Sociology^^	3

All program prerequisite requirements require a grade of C or higher and an overall 2.5 GPA maintained.

Program Requirements		48 Hours	
OTA 200	Foundations of Occupational Therapy	3	
OTA 205	Medical Conditions in Occupational Therapy	3	
OTA 210	Activity Analysis and Therapeutic Media in Occupational Therapy	3	
OTA 215	Mental Health and Geriatric Practice	4	
OTA 220	Pediatric and Adolescent Practice	4	48
OTA 250	Functional Kinesiology	3	
OTA 255	Physical Disabilities Practice	4	
OTA 260	Community Practice and Emerging Practice in Occupational Therapy	3	
OTA 265	Ethics, Management and Leadership	3	
OTA 270	Preclinical and Professional Skills	2	
OTA 290	Level II Fieldwork A	8	
OTA 295	Level II Fieldwork B	8	

^^*Courses to complete with a grade of C or higher*

All program requirements require a grade of C or higher and an overall 2.5 GPA maintained.

Degree Total	80 Hours

Associate of Applied Science in Health Care Specialist with Emphasis in Pharmacy Technician

The Health Care Specialist with emphasis in Pharmacy Technician program includes all the courses from the Professional Certificate in Pharmacy Technician. Graduates of this program will have the skills necessary to work in both retail and hospital pharmacies, as well as related fields in the health care industry. The CPhT is a nationally recognized certification and is required in some states.

General Education Requirements — 22 Hours

Oral Communications — 3 Hours

COMM 101	Public Speaking	3

Written Communications — 3 Hours

ENGL 110	Communication for Business and Industry	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Mathematical Sciences — 3 Hours

MATH 110	Intermediate Algebra with Review^^	5
MATH 112	Intermediate Algebra^^	3

Natural Sciences — 7 Hours

BIO 103	Human Biology	3
CHEM 101	Introduction to Chemistry with Lab	4

Other General Education Requirements — 3 Hours

SOC 100	General Sociology	3

Program Requirements — 39 Hours

BHS 200	Introduction to Behavioral Health Support^^	3
CAPP 125	Microcomputer Applications^^	3
HEOC 119	Medical Terminology^^	3
HIT 105	Health Care Technologies^^	3
PHRM 102	Top 200 Medications^^	1
PHRM 104	Calculations for Pharmacy Technician^^	3
PHRM 106	Role of the Pharmacy Technician^^	3
PHRM 109	Pharmacology^^	3
PHRM 110	Federal Law and Ethics in Pharmacy Practice^^	2
PHRM 115	Pharmacy Technician Certification^^	3
PHRM 122	Advanced Top 200 and Over-the-Counter Medications^^	3
PHRM 124	Inventory Control and Financial Issues in Pharmacy^^	3
PHRM 175	Professional Practical Experience^^	3
SS 104	College Skills	3

^^*Courses to complete with a grade of C or higher*

Degree Total — 61 Hours

Associate of Applied Science in Manufacturing Technology with Emphasis in Precision Machining Technology

The Manufacturing Technology with Emphasis in Precision Machining Technology program teaches the processes of manufacturing and machining with an understanding of specifications, dimensions, materials, quality, print reading, assembly methods, and inspection. The program prepares students for machining-related occupations such as machinist helper, manual machine operator, entry machinist, computer numerical control (CNC) operator, CNC setup, and manufacturing technician, all with a strong emphasis on safety. Because of the demanding changes in technology, the need for skilled manufacturing personnel with communications, design, decision-making and computer skills is increasing. The CNC equipment in the machine tool program is interfaced with the computer aided drafting (CAD) and computer aided manufacturing (CAM) lab to provide students with integrated manufacturing skills. The physical requirements for this occupation typically include lifting up to 50 pounds, pushing, pulling, reaching, walking, kneeling, manual dexterity, and standing for long periods of time.

All students should be aware welding fumes produce a chemical known to the state of California to cause cancer and birth defects (or other reproductive harm). Students should review the Material Data Safety Sheets (MSDS) available in the welding department located in the Olen Howard Welding Lab to be aware of the hazards of welding fumes.

General Education Courses — 15 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I	3
ENGL 110	Communication for Business and Industry	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3
COMM 105	Interpersonal Communication	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Mathematical Sciences — 3 Hours

TECH 101	Technical Math	3

Sciences — 3 Hours

PHYS 110	Survey of Physics with Lab	5
TECH 102	Applied Science	3

Program Requirements — 46 Hours

MACH 101	Introduction to Machining^^	4
MACH 102	Lathe and Milling Machine Operations^^	4
MACH 103	Milling and Grinding Machine Applications^^	4
MACH 104	Advanced Machining^^	4
MACH 105	Metrology^^	4
MACH 111	Introduction to CNC Machining^^	4
MACH 117	Introduction to CNC Programming^^	4
MACH 118	Intermediate CNC Machining^^	4
MACH 119	Advanced CNC Machining^^	4
MACH 134	Computer Aided Manufacturing^^	4
MACH 135	Advanced Computer Aided Manufacturing^^	4
WELD 132	Gas Tungsten Arc Welding I	2

^^*Courses to complete with a grade of C or higher*

Degree Total — 61 Hours

Associate of Applied Science in Radiologic Technology

The Radiologic Technology program is dedicated to serving the rural communities of western Missouri through the preparation of highly competent, registry-eligible medical imaging professionals. The program provides a solid educational base and a thorough professional preparation that will allow the graduate to competitively enter the workforce, continue their education in advanced imaging technologies, and/or transfer into baccalaureate degree programs in imaging science. Radiologic technologists are educated in image production, radiation protection and image evaluation. Although an interdisciplinary team of radiologists, radiologic technologists and support staff plays a critical role in the delivery of health services, it is the radiologic technologist who performs the radiologic examination that creates the images needed for diagnosis. Completion of an Accredited Radiologic Technology program is required to take the American Registry of Radiologic Technologists' certifying exam. The State Fair Community College Radiologic Technology program is accredited by The Joint Review Committee on Education in Radiologic Technology.

Admission Process

Admission to the program is selective and an informational packet with an application to the program is available online. Admission criteria can be found in the Radiologic Technology application online at www.sfccmo.edu/radiologic-technology. Students are eligible to submit the program application packet when all prerequisite courses are complete or will be complete by the end of the spring semester of the year in which they are applying, in addition to meeting other application criteria. Successful program applicants are subject to background checks and drug tests that could prevent an applicant's progression in the program.

Note: If a student has taken an Anatomy and Physiology I (A/P) (4 credit hours) or Anatomy and Physiology II course (A/P) (4 credit hours) from an accredited higher education institution, this does not satisfy the requirements of either Anatomy or Physiology courses that are required by this program. If a student's transcript indicates BOTH A/P I and A/P II courses with a grade of B or higher, this will satisfy the Anatomy and Physiology requirements of this program. If a student takes A/P I and A/P II and one of the grades for these is lower than a grade of B, the student must repeat that course or take State Fair Community College's separate Anatomy and Physiology courses. All required (including prerequisites for the program) science courses must meet the requirement of having been completed within the last 10 years at the time of application to the State Fair Community College Radiologic Technology program.

Program Prerequisites — 17 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I^^	3
ENGL 102	English Composition II^^	3

Mathematical Sciences — 3 Hours

MATH 110	Intermediate Algebra with Review^	5
MATH 112	Intermediate Algebra^	3
MATH 113	Mathematical Reasoning and Modeling^	3
MATH 114	Precalculus Algebra^	3
MATH 119	Statistical Reasoning^	3

Natural Sciences — 8 Hours

BIO 207	Human Anatomy with Lab^	4
BIO 208	Human Physiology with Lab^	4

Other Prerequisite Requirements — 3 Hours

HEOC 119	Medical Terminology^^	3

^Courses to complete with a grade of B or higher

^^Courses to complete with a grade of C or higher

**Courses can be completed prior to the start of the program*

Program Requirements — 65 Hours

Oral Communications — 3 Hours

COMM 101	Public Speaking^^*	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877^^*	3
HIST 102	U.S. History Since 1877^^*	3
POLS 101	American/National Government^^*	3
RAD 106	Clinical Education I^^	3
RAD 109	Clinical Education II^^	2
RAD 111	Clinical Education III^^	2
RAD 113	Clinical Education IV^^	4
RAD 115	Clinical Education V^^	4
RAD 120	Radiographic Procedures I^^	3
RAD 122	Radiographic Procedures II^^	3
RAD 124	Radiographic Procedures III^^	3
RAD 128	Introduction to Radiologic Sciences and Patient Care^^	3
RAD 130	Radiation Production and Characteristics^^	3
RAD 134	Radiographic Exposures and Quality Control^^	3
RAD 137	Radiation Protection^^	3
RAD 140	Radiologic Pharmacology^^	3
RAD 142	Trauma and Advanced Imaging^^	3
RAD 144	Radiation Biology^^	2
RAD 146	Imaging Equipment^^	3
RAD 150	Radiographic Pathology^^	3
RAD 152	Image Analysis^^	3
RAD 154	Sectional Anatomy^^	3
RAD 170	Preparing for Professionalism^^	3

Degree Total — 82 Hours

Associate of Applied Science in Respiratory Care

State Fair Community College offers the Respiratory Care program through the Missouri Health Professional Consortium (MHPC) and is coordinated through East Central College as a hybrid program. The AAS in Respiratory Care is a one-plus-one-degree program which prepares students to practice as Registered Respiratory Therapist (RRT) and to become state licensed as a Respiratory Care Practitioner. Upon graduation, students will receive their Associate of Applied Science Degree in Respiratory Care and will be eligible to take the Therapist Multiple Choice (TMC) and Clinical Simulation Exam (CSE) administered by the National Board for Respiratory Care (NBRC) to obtain the Registered Respiratory Therapy (RRT) credential.

Registered Respiratory Therapists (RRT) work with critical and non-critical patients in a variety of settings which include hospitals, surgery centers, rehabilitation centers, education, research, and medical equipment sales.

Admission Process

A selective admission process is utilized. Students must have a "C" or better in all prerequisite coursework, have a cumulative college GPA of 2.5, and complete a minimum of 8 hours of job shadowing, and complete a pre-entrance exam to apply to the program. An information/application packet can be found online at https://www.sfccmo.edu/academics-programs/areas-ofstudy/respiratory-care/.

Program Prerequisites — 26 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I^^	3

Oral Communications — 3 Hours

COMM 101	Public Speaking^^	3
COMM 103	Small Group Communication^^	3
COMM 105	Interpersonal Communication^^	3
COMM 190	Argumentation and Debate^^	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877^^*	3
HIST 102	U.S. History Since 1877^^*	3
POLS 101	American/National Government^^*	3

Mathematical Sciences — 3 Hours

MATH 110	Intermediate Algebra with Review^	5
MATH 112	Intermediate Algebra^	3
MATH 113	Mathematical Reasoning and Modeling^	3
MATH 114	Precalculus Algebra^	3
MATH 119	Statistical Reasoning^	3

Natural Sciences — 8 Hours

BIO 207	Human Anatomy with Lab^	4
BIO 208	Human Physiology with Lab^	4

Other Prerequisite Requirements — 6 Hours

HEOC 119	Medical Terminology^^	3
PSY 101	General Psychology^^	3

All program prerequisite requirements require a grade of C or higher and an overall 2.5 GPA maintained.

Program Requirements — 41 Hours

RSC 101	Fundamentals of Respiratory Care^^	3
RSC 105	Introduction to Respiratory Disease^^	3
RSC 110	Respiratory Care Physiology^^	3
RSC 115	Respiratory Equipment & Therapeutics^^	3
RSC 120	Respiratory Clinical I^^	1
RSC 121	Respiratory Care Lab I^^	2
RSC 150	Advanced Respiratory Care^^	3
RSC 155	Mechanical Ventilation^^	3
RSC 160	Cardiopulmonary Diagnostics^^	3
RSC 165	Respiratory Pharmacology^^	2
RSC 170	Respiratory Care Clinical II^^	2
RSC 171	Respiratory Care Lab II^^	1
RSC 201	Neonatal and Pediatric Respiratory Care^^	3
RSC 205	Specialized Respiratory Procedures^^	3
RSC 220	Respiratory Care Clinical III^^	3
RSC 221	Respiratory Care Lab III^^	1
RSC 291	Respiratory Care Capstone^^	2

All program requirements require a grade of C or higher and an overall 2.5 GPA maintained.

^^Courses to complete with a grade of C or higher

Degree Total — 67 Hours

Associate of Applied Science in Diagnostic Medical Sonography

Diagnostic Medical Sonographers, or ultrasound technologists, operate equipment that utilizes high frequency sound waves to produce images of internal organs. The images obtained by sonographers are used in the diagnosis and monitoring of various medical conditions and disease processes. Sonographers may specialize in multiple modalities including, but not limited to, cardiac, vascular, abdomen, and obstetrics and gynecology. Because of the high levels of decisional latitude and diagnostic input, sonographers have a high degree of responsibility in the diagnostic process.

About the Program

Through classroom theory, laboratory practice and clinical application students learn to safely use ultrasound in the diagnosis of trauma and disease. Students are introduced to the vast opportunities in diagnostic medical sonography and achieve entry-level competency in the performance and evaluation of ultrasound examinations and procedures. This is an intense 22-month course of study.

Admission Process

Students in the program are admitted to the College on the same basis as other students, but admission to the College does not ensure admission into the program. Admission to the Diagnostic Medical Sonography program requires an additional admission application following admission to the college. An information/application packet is available online at www.sfccmo.edu/diagnosticmedical-sonography.

Enrollment in the program is selective and admission cannot be offered to all qualified applicants. A selection committee comprised of the program director, clinical coordinator, members of the advisory committee and possibly other college personnel will evaluate students for the class.

Only students meeting the minimum requirements and who have submitted a completed application packet prior to the application deadline will be presented to the Admissions Committee. Applicants will receive a letter regarding admissions status following committee review. Decisions of the Admissions Committee are final.

Program Prerequisites — 26 Hours

Written and Oral Communications — 6 Hours

COMM 101	Public Speaking^	3
ENGL 101	English Composition I^	3
ENGL 102	English Composition II^	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877^	3
HIST 102	U.S. History Since 1877^	3
POLS 101	American/National Government^	3

Mathematical Sciences — 3 Hours

MATH 113	Mathematical Reasoning and Modeling^	3
MATH 114	Precalculus Algebra^	3
MATH 119	Statistical Reasoning^	3

Natural Sciences — 8 Hours

BIO 207	Human Anatomy with Lab^	4
BIO 208	Human Physiology with Lab^	4

Other Prerequisite Requirements — 6 Hours

HEOC 119	Medical Terminology^	3
PHYS 110	Survey of Physics with Lab^^ ***OR***	3-5
RAD 130	Radiation Production and Characteristics	

^Courses to complete with a grade of B or higher

^^Courses to complete with a grade of C or higher

Program Requirements — 42.5 Hours

DMS 102	Patient Care and Health Care Communication^	2
DMS 107	Ultrasound Scanning Lab I^	4
DMS 108	Seminar in Sonography^	2
DMS 120	Sonography Principles and Instrumentation I^	3
DMS 122	Sonography Principles and Instrumentation II^	3
DMS 127	Ultrasound Lab II^	4
DMS 145	Sonography Clinical I^	4
DMS 150	Vascular Sonography I^	2
DMS 152	Vascular Sonography II^	2
DMS 154	Vascular Sonography III^	2
DMS 155	Sonography Clinical II^	7
DMS 165	Sonography Clinical III^	7
HEOC 135	Allied Health Career Development	0.5

Cardiac Track or General Track — 12 Hours

Cardiac Track

DMS 103	Cardiac Ultrasound I^	3
DMS 113	Cardiac Ultrasound II^	3
DMS 123	Cardiac Ultrasound III^	3
DMS 133	Cardiac Ultrasound IV^	3

General Track

DMS 130	General Sonography I^	2
DMS 132	General Sonography II^	2
DMS 134	General Sonography III^	2
DMS 140	OB/GYN Sonography I^	2
DMS 142	OB/GYN Sonography II^	2
DMS 144	OB/GYN Sonography III^	2

Degree Total — 80.5 Hours

Associate of Applied Science in Surgical Technology

The Surgical Technology program is designed to deliver the educational foundation for students to earn an Associate of Applied Science in Surgical Technology degree. The minimum expectation is to prepare entry-level Surgical Technologists who are competent in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains to enter the profession.

This 12-month hybrid program requires an additional program application and acceptance. The program includes didactic, lab, and clinical instruction methods. Upon successful completion of the required courses and clinical case requirements, the students will sit for the certification exam offered through the National Board of Surgical Technology and Surgical Assisting (NBSTSA). Upon passing the certification exam, graduates will be recognized as a Certified Surgical Technologist.

The Program Information and Application is available online at www.sfccmo.edu/surgical-tech or by request from Student Services. The information contains the admission requirements, fee schedule, program mission, sequencing of courses, a link to the online application form, and other pertinent information. Program applicants are subject to background checks and drug tests that could prevent an applicant's progression in the program.

An applicant must meet all admission requirements outlined in the program information prior to entering the program. State Fair Community College does accept transfer courses from other colleges, but an applicant would be advised to have their transcript evaluated before assuming transfer of credits.

The Surgical Technology program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of ARC/STSA (Accreditation Review Council on Education in Surgical Technology and Surgical Assisting).

Commission on Accreditation of Allied Health Education Programs
9355 113th St N, #7709
Seminole, FL 33775
727-210-2350
www.caahep.org

Program Prerequisites — 27 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I^^	3
ENGL 102	English Composition II^^	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication^^	3
COMM 101	Public Speaking^^	3
COMM 103	Small Group Communication^^	3
COMM 105	Interpersonal Communication^^	3
COMM 190	Argumentation and Debate^^	3

Civics — 3 Hours

Coursework must include at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

HIST 101	U.S. History Before 1877^^	3
HIST 102	U.S. History Since 1877^^	3
POLS 101	American/National Government^^	3

Mathematical Sciences — 3 Hours

MATH 110	Intermediate Algebra with Review^^	5
MATH 112	Intermediate Algebra^^	3
MATH 113	Mathematical Reasoning and Modeling^^	3
MATH 114	Precalculus Algebra^^	3

Natural Sciences — 12 Hours

BIO 207	Human Anatomy with Lab^^	4
BIO 208	Human Physiology with Lab^^	4
BIO 221	Microbiology^^	4

Other Prerequisite Requirements — 3 Hours

HEOC 119	Medical Terminology^	3

Program Requirements — 35.5 Hours

NURS 102	CPR for Health Care Providers	0.5
SRGT 200	Introduction to Surgical Technology	1
SRGT 205	Fundamentals of Surgical Technology	3
SRGT 210	Surgical Equipment and Instrumentation	3
SRGT 215	Advanced Surgical Technology Concepts	3
SRGT 220	Specialty Surgical Instrumentation	3
SGRT 225	Surgical Technology Introductory Clinical	1
SRGT 230	Surgical Procedures I	2.5
SRGT 235	Surgical Technology Clinical I	4.5
SRGT 240	Surgical Procedures II	2.5
SRGT 245	Surgical Technology Clinical II	4.5
SRGT 250	Surgical Procedures III	2
SRGT 255	Surgical Technology Clinical III	4
SRGT 260	Certification Prep and Review	1

^^*Courses to complete with a grade of C or higher*

Degree Total — 62.5 Hours

Associate of Arts in Teaching

The Associate of Arts in Teaching (AAT) degree prepares students with a foundation in educational principles, theory and practice, and exposes them to complex problems and relationships in the field of education. Teachers play an essential role in fostering the intellectual and social development of children in their formative years. Using a variety of active learning approaches, teachers help children understand abstract principles, solve problems, and develop critical thought processes. Whether desiring to teach preschool or elementary school, teachers provide the tools and the environment for their students to develop into responsible citizens. Any Missouri community college student who has earned an AAT degree is guaranteed consistent treatment by the majority of four-year transfer institutions. Completing the AAT is the first step to achieving a Bachelor of Arts or a Bachelor of Science in an Elementary Education degree. Bachelor's degree institutions with teacher education programs have different requirements. It is essential to work with an advisor to select the correct courses (categories indicated with ** in the Program Requirements) needed for the transfer institution of choice.

The Missouri Department of Elementary and Secondary Education-Office of Educator Quality is working with representative stakeholder groups to redesign the standards for educator preparation including certification requirements. These changes and implementation schedule will be communicated to students through individual advising sessions, meetings, and/or other college communications. If there are any questions and/ or concerns, please contact the Director of Educator Preparation in the Office of Educator Quality.

Other AAT Requirements

• A background check is required prior to beginning the program.
• A cumulative content area GPA of 3.0 or higher is required for EDUC 110, EDUC 180, EDUC 205, EDUC 209, EDUC 212, EDUC 218, EDUC 220, EDUC 228, EDUC 240, and EDUC 250 taken at SFCC or transferred in as equivalent.
• Minimum institutional GPA of 2.0 to apply for graduation.
• Educator Preparation Programs (EPPs) will make their own decisions regarding tests that may be used for admission.

General Education Core — 38 Hours

Written Communications — 6 Hours

ENGL 101	English Composition I	3
ENGL 102	English Composition II	3

Oral Communications — 3 Hours

COMM 101	Public Speaking	3

Social and Behavioral Sciences — 9 Hours

Coursework must include classes from at least two disciplines, including at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

Civics

HIST 101	U.S. History Before 1877 ***OR***	3
HIST 102	U.S. History Since 1877	
POLS 101	American/National Government	3

Geography

GEOG 101	World Geography	3

Mathematical Sciences — 3 Hours

MATH 113	Mathematical Reasoning & Modeling	3
MATH 114	Precalculus Algebra	3
MATH 119	Statistical Reasoning	3

Natural Sciences — 8 Hours

BIO 112	Principles of Biology with Lab ***OR***	4
BIO 125	General Biology with Lab	
EASC 106	Introduction to Geology with Lab ***OR***	4-5
PHYS 110	Survey of Physics with Lab	

Humanities and Fine Arts — 9 Hours

Must include courses from at least two disciplines, with a maximum of 3 credit hours from the performance discipline and the total General Education Core

Art

ART 101	Art Appreciation	3

Literature

LIT 101	Introduction to Literature	3
LIT 107	American Literature	3

Music

MUS 100	Music Theory I	3
MUS 101	Music Appreciation	3
MUS 102	History of Rock Music	3
MUS 103	Music History & Literature Before 1800	3
MUS 104	Music History & Literature Since 1800	3

Philosophy

PHIL 101	Introduction to Philosophy	3
PHIL 102	Ethics	3

Religion

PHIL 104	Living Religions	3

Theatre

THEA 107	Introduction to Theatre	3

General Education Electives — 4 Hours

Select additional hours from the General Education categories listed above for a minimum total of 42 hours to meet the General Education Core.

Program Requirements — 15.5 Hours

EDUC 108	Introduction to the Field of Education	0.5
EDUC 205	Teaching Profession with Field Experience^^	3
EDUC 209	Foundations of Education in a Diverse Society^^	3
EDUC 212	Educational Technology^^	3
EDUC 220	Educational Psychology^^	3
PSY 102	Child Psychology^^	3

Program Electives — 9 Hours

ECD 107	Child Nutrition, Health and Safety^^	3
ECON 101	Principles of Macroeconomics	3
EDUC 110	Introduction to Physical Education in the Elementary School^^	2
EDUC 218	Children's Literature^^	3
EDUC 228	Education of Exceptional Learners pre K-12^^	3
EDUC 240	Multicultural Education^^	3
FREN 101	Elementary French I	3
GERM 101	Elementary German I	3
SOC 120	American Diversity	3
SPAN 101	Elementary Spanish I	3

Degree Total — 66.5 Hours

Associate of Fine Arts in Art

The Associate of Fine Arts in Art degree from State Fair Community College is designed for the student who wants to transfer to a four-year college or university to earn a bachelor's degree in Art.

General Education Core — 42 Hours

Written Communications — 6 Hours

ENGL 101	English Composition I	3
ENGL 102	English Composition II	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3
COMM 103	Small Group Communication	3
COMM 105	Interpersonal Communication	3
COMM 190	Argumentation and Debate	3

Social and Behavioral Sciences — 9 Hours

Coursework must include classes from at least two disciplines, including at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

Civics

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Criminal Justice

CJ 102	Introduction to Criminal Justice	3

Economics

AGRI 132	Agriculture Economics	3
ECON 101	Macroeconomics	3
ECON 102	Microeconomics	3

Geography

GEOG 101	World Geography	3

History

HIST 108	World History Before 1500	3
HIST 109	World History After 1500	3

Psychology

PSY 101	General Psychology	3
PSY 210	Lifespan Development	3

Social & Behavioral Science Communications

COMM 110	Introduction to Mass Communication	3
SOC 110	Media, Culture and Society	3

Sociology

SOC 100	General Sociology	3
SOC 101	Social Problems	3
SOC 120	American Diversity	3

Mathematical Sciences — 3 Hours

MATH 113	Mathematical Reasoning & Modeling	3
MATH 114	Precalculus Algebra	3
MATH 119	Statistical Reasoning	3

Natural Sciences — 7 Hours

Must include courses from at least two disciplines, including one course with a lab component

Astronomy

EASC 120	Introduction to Astronomy	3

Biology

BIO 100	Essentials of Biology	3
BIO 105	Introduction to Ecology	3
BIO 112	Principles of Biology with Lab	4
BIO 125	General Biology with Lab	4

Chemistry

CHEM 101	Introduction to Chemistry with Lab	4
CHEM 123	General Chemistry I with Lab	5

Geology

EASC 106	Introduction to Geology with Lab	4
EASC 118	Environmental Geology	3

Life Sciences

BIO 103	Human Biology	3
BIO 207	Human Anatomy with Lab	4
BIO 208	Human Physiology with Lab	4

Physics

PHYS 110	Survey of Physics with Lab	5
PHYS 211	Engineering Physics I with Lab	5

Associate of Fine Arts in Art (Continued)

Humanities and Fine Arts — 9 Hours

Must include courses from at least two disciplines, with a maximum of 3 credit hours from the performance discipline and the total General Education Core

Film

COMM 120	History of Film	3

Foreign Language

FREN 101	Elementary French I	3
FREN 102	Elementary French II	3
GERM 101	Elementary German I	3
GERM 102	Elementary German II	3
SPAN 101	Elementary Spanish I	3
SPAN 102	Elementary Spanish II	3

Literature

LIT 101	Introduction to Literature	3
LIT 107	American Literature	3
LIT 109	British Literature	3
LIT 112	World Literature	3

Music

MUS 100	Music Theory I	3
MUS 101	Music Appreciation	3
MUS 102	History of Rock Music	3
MUS 103	Music History & Literature Before 180(	3
MUS 104	Music History & Literature Since 1800	3

Performance/Production of Creative Arts

A maximum of 3 credit hours can be applied to the Humanities and Fine Arts category and the total General Education Core.

ART 116	Painting I	3
ART 122	Sculpture I	3
ART 126	Ceramics I	3
ART 160	Introduction to Graphic Design	3
COMM 161	Media Productions I	3
MUS 119	Jazz Band I	1
MUS 196	Concert Band I	1
MUS 197	Concert Band II	1
MUS 204A	Chamber Singers I	1
MUS 210A	Contemporary Choir I	1
THEA 110	Stagecraft and Lighting	3
THEA 111	Acting I	3
THEA 131	Script Analysis	3

Philosophy

PHIL 101	Introduction to Philosophy	3
PHIL 102	Ethics	3

Religion

PHIL 104	Living Religions	3

Theatre

THEA 107	Introduction to Theatre	3

General Education Electives — 5 Hours

Select additional hours from the General Education categories listed above for a minimum total of 42 hours to meet the General Education Core.

Art Core — 15 Hours

ART 103	Design I	3
ART 112	Drawing I	3
ART 122	Sculpture I ***OR***	3
ART 126	Ceramics I	
ART 140	Art History Survey I	3
ART 142	Art History Survey II	3

Art Electives — 9 Hours

ART 104	Design II	3
ART 106	Watercolor I	3
ART 107	Watercolor II	3
ART 108	Watercolor III	3
ART 110	Printmaking	3
ART 113	Drawing II	3
ART 114	Figure Drawing I	3
ART 115	Figure Drawing II	3
ART 116	Painting I	3
ART 117	Painting II	3
ART 118	Painting III	3
ART 122	Sculpture I	3
ART 123	Sculpture II	3
ART 126	Ceramics I	3
ART 127	Ceramics II	3

Degree Total — 66 Hours

Associate of Fine Arts in Music

The Associate of Fine Arts in Music degree from State Fair Community College is designed for the student who wants to transfer to a four-year college or university to earn a bachelor's degree in music. Students must attend and pass four semesters of MUS 195 Concert and Recital Attendance.

General Education Core — 42 Hours

Written Communications — 6 Hours

ENGL 101	English Composition I	3
ENGL 102	English Composition II	3

Oral Communications — 3 Hours

COMM 101	Public Speaking	3
COMM 103	Small Group Communication	3
COMM 105	Interpersonal Communication	3
COMM 190	Argumentation and Debate	3

Social and Behavioral Sciences — 9 Hours

Coursework must include classes from at least two disciplines, including at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

Civics

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Criminal Justice

CJ 102	Introduction to Criminal Justice	3

Economics

AGRI 132	Agriculture Economics	3
ECON 101	Macroeconomics	3
ECON 102	Microeconomics	3

Geography

GEOG 101	World Geography	3

History

HIST 108	World History Before 1500	3
HIST 109	World History After 1500	3

Psychology

PSY 101	General Psychology	3
PSY 210	Lifespan Development	3

Social & Behavioral Science Communications

COMM 110	Introduction to Mass Communication	3

Sociology

SOC 100	General Sociology	3
SOC 101	Social Problems	3
SOC 120	American Diversity	3

Mathematical Sciences — 3 Hours

MATH 113	Mathematical Reasoning & Modeling	3
MATH 114	Precalculus Algebra	3
MATH 119	Statistical Reasoning	3

Natural Sciences — 7 Hours

Must include courses from at least two disciplines, including one course with a lab component

Astronomy

EASC 120	Introduction to Astronomy	3

Biology

BIO 100	Essentials of Biology	3
BIO 105	Introduction to Ecology	3
BIO 112	Principles of Biology with Lab	4
BIO 125	General Biology with Lab	4

Chemistry

CHEM 101	Introduction to Chemistry with Lab	4
CHEM 123	General Chemistry I with Lab	5

Geology

EASC 106	Introduction to Geology with Lab	4
EASC 118	Environmental Geology	3

Life Sciences

BIO 103	Human Biology	3
BIO 207	Human Anatomy with Lab	4
BIO 208	Human Physiology with Lab	4

Physics

PHYS 110	Survey of Physics with Lab	5
PHYS 211	Engineering Physics I with Lab	5

Humanities and Fine Arts — 3 Hours

Must include courses from at least two disciplines, with a maximum of 3 credit hours from the performance discipline and the total General Education Core

Art

ART 101	Art Appreciation	3
ART 140	Art History Survey I	3
ART 142	Art History Survey II	3

Associate of Fine Arts in Music (Continued)

Film

COMM 120	History of Film	3

Foreign Language

FREN 101	Elementary French I	3
FREN 102	Elementary French II	3
GERM 101	Elementary German I	3
SPAN 101	Elementary Spanish I	3
SPAN 102	Elementary Spanish II	3

Literature

LIT 101	Introduction to Literature	3
LIT 107	American Literature	3
LIT 109	British Literature	3
LIT 112	World Literature	3

Performance/Production of Creative Arts

A maximum of 3 credit hours can be applied to the Humanities and Fine Arts category and the total General Education Core.

ART 112	Drawing I	3
ART 116	Painting I	3
ART 122	Sculpture I	3
ART 126	Ceramics I	3
ART 160	Introduction to Graphic Design	3
COMM 161	Media Productions I	3
ENGL 106	Creative Writing	3
MUS 119	Jazz Band I	1
MUS 196	Concert Band I	1
MUS 197	Concert Band II	1
MUS 204A	Chamber Singers I	1
MUS 210A	Contemporary Choir I	1
THEA 110	Stagecraft and Lighting	3
THEA 111	Acting I	3
THEA 131	Script Analysis	3

Philosophy

PHIL 101	Introduction to Philosophy	3
PHIL 102	Ethics	3

Religion

PHIL 104	Living Religions	3

Theatre

THEA 107	Introduction to Theatre	3

General Education Electives — 5 Hours

Select additional hours from the General Education categories listed above for a minimum total of 42 hours to meet the General Education Core.

Music Core — 20 Hours

MUS 100	Music Theory I	3
MUS 105	Aural Training I	1
MUS 106	Music Theory II	3
MUS 107	Music Theory III	3
MUS 108	Music Theory IV	3
MUS 109	Aural Training II	1
MUS 110	Aural Training III	1
MUS 111	Aural Training IV	1
MUS 145	Piano Class I	2
MUS 146	Piano Class II	2

Music Electives — 5 Hours

MUS 102	History of Rock Music	3
MUS 119	Jazz Band I	1
MUS 120	Jazz Band II	1
MUS 121	Jazz Band III	1
MUS 122	Jazz Band IV	1
MUS 136	Applied Instrumental Lessons I	1-2
MUS 137	Applied Instrumental Lessons II	1-2
MUS 138	Applied Instrumental Lessons III	1-2
MUS 139	Applied Instrumental Lessons IV	1-2
MUS 140	Guitar Class I	2
MUS 150	Applied Piano Lessons I	1-2
MUS 151	Applied Piano Lessons II	1-2
MUS 152	Applied Piano Lessons III	1-2
MUS 153	Applied Piano Lessons IV	1-2
MUS 160	Applied Voice Lessons I	1
MUS 161	Applied Voice Lessons II	1
MUS 162	Applied Voice Lessons III	1
MUS 163	Applied Voice Lessons IV	1
MUS 204A	Chamber Singers I	1
MUS 205A	Chamber Singers II	1
MUS 206A	Chamber Singers III	1
MUS 207A	Chamber Singers IV	1
MUS 210A	Contemporary Choir I	1
MUS 211A	Contemporary Choir II	1
MUS 212A	Contemporary Choir III	1
MUS 213A	Contemporary Choir IV	1

Concert and Recital Attendance — 4 Semesters

MUS 195	Concert and Recital Attendance	0

Degree Total — 67 Hours

Associate of Fine Arts in Musical Theatre

The Associate of Fine Arts in Theatre with Emphasis in Musical Theatre degree from State Fair Community College is designed for the student who wants to transfer to a four-year college or university to earn a bachelor's degree in Musical Theatre.

General Education Core — 42 Hours

Written Communications — 6 Hours

ENGL 101	English Composition I	3
ENGL 102	English Composition II	3

Oral Communications — 3 Hours

COMM 101	Public Speaking	3
COMM 103	Small Group Communication	3
COMM 105	Interpersonal Communication	3
COMM 190	Argumentation and Debate	3

Social and Behavioral Sciences — 9 Hours

Coursework must include classes from at least two disciplines, including at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

Civics

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Criminal Justice

CJ 102	Introduction to Criminal Justice	3

Criminology

CJ 107	Criminology	3

Economics

AGRI 132	Agriculture Economics	3
ECON 101	Macroeconomics	3
ECON 102	Microeconomics	3

Geography

GEOG 101	World Geography	3

History

HIST 108	World History Before 1500	3
HIST 109	World History After 1500	3

Psychology

PSY 101	General Psychology	3
PSY 210	Lifespan Development	3

Social & Behavioral Science Communications

COMM 110	Introduction to Mass Communication	3
SOC 110	Media, Culture, & Society	3

Sociology

SOC 100	General Sociology	3
SOC 101	Social Problems	3
SOC 102	Marriage and Family	3
SOC 120	American Diversity	3

Mathematical Sciences — 3 Hours

MATH 113	Mathematical Reasoning & Modeling	3
MATH 114	Precalculus Algebra	3
MATH 119	Statistical Reasoning	3

Natural Sciences — 7 Hours

Must include courses from at least two disciplines, including one course with a lab component

Astronomy

EASC 120	Introduction to Astronomy	3

Biology

BIO 100	Essentials of Biology	3
BIO 105	Introduction to Ecology	3
BIO 112	Principles of Biology with Lab	4
BIO 113	Cellular Biology	4
BIO 125	General Biology with Lab	4

Chemistry

CHEM 101	Introduction to Chemistry with Lab	4
CHEM 123	General Chemistry I with Lab	5

Geology

EASC 106	Introduction to Geology with Lab	4
EASC 118	Environmental Geology	3

Life Sciences

BIO 103	Human Biology	3
BIO 207	Human Anatomy with Lab	4
BIO 208	Human Physiology with Lab	4

Physics

PHYS 110	Survey of Physics with Lab	5
PHYS 211	Engineering Physics I with Lab	5

Associate of Fine Arts in Musical Theatre (Continued)

Humanities and Fine Arts — 3 Hours

Must include courses from at least two disciplines, with a maximum of 3 credit hours from the performance discipline and the total General Education Core

Art

ART 101	Art Appreciation	3
ART 140	Art History Survey I	3
ART 142	Art History Survey II	3

Film

COMM 120	History of Film	3

Foreign Language

FREN 101	Elementary French I	3
FREN 102	Elementary French II	3
GERM 101	Elementary German I	3
GERM 102	Elementary German II	3
SPAN 101	Elementary Spanish I	3
SPAN 102	Elementary Spanish II	3

Literature

LIT 101	Introduction to Literature	3
LIT 107	American Literature	3
LIT 109	British Literature	3
LIT 112	World Literature	3

Music

MUS 100	Music Theory I	3
MUS 101	Music Appreciation	3
MUS 102	History of Rock Music	3
MUS 103	Music History & Literature Before 1800	3
MUS 104	Music History & Literature Since 1800	3

Performance/Production of Creative Arts

A maximum of 3 credit hours can be applied to the Humanities and Fine Arts category and the total General Education Core.

COMM 161	Media Productions I	3
ENGL 106	Creative Writing	3

Philosophy

PHIL 101	Introduction to Philosophy	3
PHIL 102	Ethics	3

Religion

PHIL 104	Living Religions	3

Theatre

THEA 107	Introduction to Theatre	3

Interdisciplinary

**Does not count toward a knowledge area but does count toward CORE 42 credit hours.*

WELL 102	Wellness for the Individual	2

General Education Electives — 5 Hours

Select additional hours from the General Education categories listed above for a minimum total of 42 hours to meet the General Education Core.

Theatre Core — 10 Hours

THEA 119	Stage Makeup	3
THEA 131	Script Analysis	3
THEA 134	Stage Voice and Movement	3
THEA 190	Theatre Capstone	1

Musical Theatre Core — 13 Hours

DANC 110	Tap I	2
DANC 120	Jazz I	2
MUS 105	Aural Training I	1
MUS 106	Music Theory II	3
MUS 109	Aural Training II	1
MUS 160	Applied Voice Lessons I	1
MUS 161	Applied Voice Lessons II	1
MUS 204A	Chamber Singers I	1
MUS 205A	Chamber Singers II	1

Degree Total — 65 Hours

Associate of Fine Arts in Theatre

The Associate of Fine Arts in Theatre degree from State Fair Community College is designed for the student who wants to transfer to a four-year college or university to earn a bachelor's degree in Theatre.

General Education Core — 42 Hours

Written Communications — 6 Hours

ENGL 101	English Composition I	3
ENGL 102	English Composition II	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3
COMM 103	Small Group Communication	3
COMM 105	Interpersonal Communication	3
COMM 190	Argumentation and Debate	3

Social and Behavioral Sciences — 9 Hours

Coursework must include classes from at least two disciplines, including at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

Civics

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Criminal Justice

CJ 102	Introduction to Criminal Justice	3

Criminology

CJ 107	Criminology	3

Economics

AGRI 132	Agriculture Economics	3
ECON 101	Macroeconomics	3
ECON 102	Microeconomics	3

Geography

GEOG 101	World Geography	3

History

HIST 108	World History Before 1500	3
HIST 109	World History After 1500	3

Psychology

PSY 101	General Psychology	3
PSY 210	Lifespan Development	3

Social & Behavioral Science Communications

COMM 110	Introduction to Mass Communication	3
SOC 110	Media, Culture, & Society	3

Sociology

SOC 100	General Sociology	3
SOC 101	Social Problems	3
SOC 102	Marriage and Family	3
SOC 120	American Diversity	3

Mathematical Sciences — 3 Hours

MATH 113	Mathematical Reasoning & Modeling	3
MATH 114	Precalculus Algebra	3
MATH 119	Statistical Reasoning	3

Natural Sciences — 7 Hours

Must include courses from at least two disciplines, including one course with a lab component

Astronomy

EASC 120	Introduction to Astronomy	3

Biology

BIO 100	Essentials of Biology	3
BIO 105	Introduction to Ecology	3
BIO 112	Principles of Biology with Lab	4
BIO 113	Cellular Biology	4
BIO 125	General Biology with Lab	4

Chemistry

CHEM 101	Introduction to Chemistry with Lab	4
CHEM 123	General Chemistry I with Lab	5

Geology

EASC 106	Introduction to Geology with Lab	4
EASC 118	Environmental Geology	3

Life Sciences

BIO 103	Human Biology	3
BIO 207	Human Anatomy with Lab	4
BIO 208	Human Physiology with Lab	4

Physics

PHYS 110	Survey of Physics with Lab	5
PHYS 211	Engineering Physics I with Lab	5

Associate of Fine Arts in Musical Theatre (Continued)

Humanities and Fine Arts — 3 Hours

Must include courses from at least two disciplines, with a maximum of 3 credit hours from the performance discipline and the total General Education Core

Art

ART 101	Art Appreciation	3
ART 140	Art History Survey I	3
ART 142	Art History Survey II	3

Film

COMM 120	History of Film	3

Foreign Language

FREN 101	Elementary French I	3
FREN 102	Elementary French II	3
GERM 101	Elementary German I	3
GERM 102	Elementary German II	3
SPAN 101	Elementary Spanish I	3
SPAN 102	Elementary Spanish II	3

Literature

LIT 101	Introduction to Literature	3
LIT 107	American Literature	3
LIT 109	British Literature	3
LIT 112	World Literature	3

Music

MUS 100	Music Theory I	3
MUS 101	Music Appreciation	3
MUS 102	History of Rock Music	3
MUS 103	Music History & Literature Before 1800	3
MUS 104	Music History & Literature Since 1800	3

Performance/Production of Creative Arts

A maximum of 3 credit hours can be applied to the Humanities and Fine Arts category and the total General Education Core.

ART 112	Drawing I	3
ART 116	Painting I	3
ART 122	Sculpture I	3
ART 126	Ceramics I	3
ART 160	Introduction to Graphic Design	3
COMM 161	Media Productions I	3
ENGL 106	Creative Writing	3
MUS 119	Jazz Band I	1
MUS 196	Concert Band I	1
MUS 197	Concert Band II	1
MUS 204A	Chamber Singers I	1
MUS 210A	Contemporary Choir I	1

Philosophy

PHIL 101	Introduction to Philosophy	3
PHIL 102	Ethics	3

Religion

PHIL 104	Living Religions	3

Theatre

THEA 107	Introduction to Theatre	3

Interdisciplinary

**Does not count toward a knowledge area but does count toward CORE 42 credit hours.*

WELL 102	Wellness for the Individual	2

General Education Electives — 5 Hours

Select additional hours from the General Education categories listed above for a minimum total of 42 hours to meet the General Education Core.

Theatre Core — 25 Hours

THEA 110	Stagecraft and Lighting	3
THEA 111	Acting I	3
THEA 119	Stage Makeup	3
THEA 122	Costume Construction	3
THEA 125	Theatre History	3
THEA 128	Introduction to Theatre Design	3
THEA 131	Script Analysis	3
THEA 134	Stage Voice and Movement	3
THEA 190	Theatre Capstone	1

Degree Total — 67 Hours

Associate of General Studies

The Associate of General Studies provides students flexibility to study areas of personal interest, complement existing talents and skills, and adapt the learning outcomes to meet future career, employment, and/or educational goals. For students planning to transfer to another college or university, this degree may not be as appropriate as an Associate of Arts, an Associate of Science, or an Associate of Applied Science degree.

General Education Core — 15 Hours

Written Communications — 3 Hours

ENGL 101	English Composition I	3
ENGL 110	Communication for Business and Industry	3

Oral Communications — 3 Hours

COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3

Mathematical Sciences — 3 Hours

TECH 101	Technical Math	3
Choose any course MATH 110 or higher		3

Social and Behavioral Sciences — 3 Hours

Coursework must include classes from at least two disciplines, including at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

Civics

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Other General Education Requirements — 3 Hours

Agriculture

AGRI 119	Soils I with Lab	4
AGRI 132	Agriculture Economics	3

Art

ART 101	Art Appreciation	3
ART 112	Drawing I	3
ART 116	Painting I	3
ART 122	Sculpture I	3
ART 126	Ceramics I	3
ART 140	Art History Survey I	3
ART 142	Art History Survey II	3
ART 160	Introduction to Graphic Design	3

Astronomy

EASC 120	Introduction to Astronomy	3

Biology

BIO 100	Essentials of Biology	3
BIO 105	Introduction to Ecology	3
BIO 112	Principles of Biology with Lab	4
BIO 113	Cellular Biology	4
BIO 125	General Biology with Lab	4

Chemistry

CHEM 101	Introduction to Chemistry with Lab	4
CHEM 123	General Chemistry I with Lab	5

Criminal Justice

CJ 102	Introduction to Criminal Justice	3

Criminology

CJ 107	Criminology	3

Economics

AGRI 132	Agriculture Economics	3
ECON 101	Macroeconomics	3
ECON 102	Microeconomics	3

Foreign Language

FREN 101	Elementary French I	3
FREN 102	Elementary French II	3
GERM 101	Elementary German I	3
GERM 102	Elementary German II	3
SPAN 101	Elementary Spanish I	3
SPAN 102	Elementary Spanish II	3

Geography

GEOG 101	World Geography	3

Geology

EASC 106	Introduction to Geology with Lab	4
EASC 118	Environmental Geology	3

History

HIST 108	World History Before 1500	3
HIST 109	World History After 1500	3

Interdisciplinary

**Does not count toward a knowledge area but does count toward CORE 42 credit hours.*

WELL 102	Wellness for the Individual	2

Associate of General Studies (Continued)

Literature

LIT 101	Introduction to Literature	3
LIT 107	American Literature	3
LIT 109	British Literature	3
LIT 112	World Literature	3

Music

MUS 100	Music Theory I	3
MUS 101	Music Appreciation	3
MUS 102	History of Rock Music	3
MUS 103	Music History & Literature Before 1800	3
MUS 104	Music History & Literature Since 1800	3

Performance/Production of Creative Arts

A maximum of 3 credit hours can be applied to the Humanities and Fine Arts category and the total General Education Core.

ENGL 106	Creative Writing	3
MUS 119	Jazz Band I	1
MUS 196	Concert Band I	1
MUS 197	Concert Band II	1
MUS 204A	Chamber Singers I	1
MUS 210A	Contemporary Choir I	1
THEA 110	Stagecraft and Lighting	3
THEA 111	Acting I	3
THEA 119	Stage Makeup	3
THEA 131	Script Analysis	3

Philosophy

PHIL 101	Introduction to Philosophy	3
PHIL 102	Ethics	3

Physics

PHYS 211	Engineering Physics I with Lab	5
PHYS 212	Engineering Physics II with Lab	5
ART 101	Art Appreciation	3
ART 140	Art History Survey I	3
ART 142	Art History Survey II	3

Psychology

PSY 101	General Psychology	3
PSY 210	Lifespan Development	3

Religion

PHIL 104	Living Religions	3

Social & Behavioral Science Communications

COMM 110	Introduction to Mass Communication	3

Sociology

SOC 100	General Sociology	3
SOC 101	Social Problems	3
SOC 102	Marriage and Family	3
SOC 120	American Diversity	3

Technical

TECH 102	Applied Science	3

Program Requirements — 45 Hours

Working with their Navigator, students should select additional courses from across a variety of areas to meet their personal goals.

Degree Total — 60 Hours

Associate of Science in Chemistry

The Associate of Science (AS) in Chemistry is designed for students who want to earn a bachelor's degree in chemistry at a fouryear institution. Students take basic courses common to most science and pre-health disciplines and continue their studies of chemistry at their transfer school. Chemistry programs at other institutions differ slightly, so it is strongly suggested that a student electing to receive an AS degree work very closely with an advisor from both State Fair Community College and the receiving institution to individually plan the four-semester degree plan.

General Education Core — 21 Hours

Written Communications — 6 Hours

ENGL 101	English Composition I	3
ENGL 102	English Composition II	3

Oral Communications — 3 Hours

COMM 101	Public Speaking	3
COMM 190	Argumentation and Debate	3

Social and Behavioral Sciences — 3 Hours

Coursework must include classes from at least two disciplines, including at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

Civics

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Other General Education Requirements — 6 Hours

AGRI 132	Agriculture Economics	3
ART 101	Art Appreciation `	3
ECON 101	Macroeconomics	3
ECON 102	Microeconomics	3
FREN 101	Elementary French I	3
LIT 107	American Literature	3
MUS 101	Music Appreciation	3
PHIL 101	Introduction to Philosophy	3
PHIL 102	Ethics	3
PHIL 104	Living Religions	3
SPAN 101	Elementary Spanish I	3
THEA 107	Introduction to Theatre	3

Program Requirements — 39 Hours

BIO 112	Principles of Biology with Lab	4
CHEM 123	General Chemistry I with Lab	5
CHEM 124	General Chemistry II with Lab	5
CHEM 221	Organic Chemistry I with Lab	5
CHEM 222	Organic Chemistry II with Lab	5
MATH 210	Calculus and Analytic Geometry I	5
PHYS 211	Engineering Physics I with Lab	5
PHYS 212	Engineering Physics II with Lab	5

Program Electives — 3 Hours

You must check the individual degree requirements at your transfer institution to determine which course is best for your area.

BIO 125	General Biology with Lab	4
MATH 120	Precalculus Trigonometry	3
MATH 211	Calculus and Analytic Geometry II	5

Degree Total — 66 Hours

Associate of Science in Engineering

The Associate of Science (AS) in Engineering is designed for students who plan to pursue a bachelor's degree in an engineering discipline. Students take core courses at SFCC common to most engineering fields, then continue their studies in their area of interest (electrical, mechanical, civil, environmental, etc.) at their transfer institution. Colleges and engineering programs differ widely, so students are encouraged to work closely with their navigator to design the two-year degree plan that works best for them.

General Education Requirements — 12 Hours

Written and Oral Communications — 6 Hours

ENGL 101	English Composition I	3
ENGL 102	English Composition II ***OR***	3
COMM 101	Public Speaking	

Social and Behavioral Sciences — 3 Hours

Coursework must include classes from at least two disciplines, including at least one Civics course. Civics Exam: HIST 101, HIST 102, POLS 101, or POLS 109 taken at SFCC beginning fall 2019 meet the requirement for Missouri Senate Bill 807 (Section 170.013.1).

Civics

HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
POLS 101	American/National Government	3

Other General Education Requirements — 3 Hours

ECON 102	Macroeconomics	3
ECON 102	Microeconomics	3

General Education Electives — 9 Hours

ART 101	Art Appreciation `	3
COMM 101	Public Speaking	3
ECON 101	Macroeconomics	3
ECON 102	Microeconomics	3
ENGL 102	English Composition II	3
FREN 101	Elementary French I	3
GERM 101	Elementary German I	3
HIST 101	U.S. History Before 1877	3
HIST 102	U.S. History Since 1877	3
LIT 101	Introduction to Literature	3
LIT 107	American Literature	3
LIT 112	World Literature	3
MATH 120	Precalculus Trigonometry	3
MUS 101	Music Appreciation	3
PHIL 101	Introduction to Philosophy	3
PHIL 102	Ethics	3
PHIL 104	Living Religions	3
POLS 101	American/National Government	3
PSY 101	General Psychology	3
SOC 100	General Sociology	3
SPAN 101	Elementary Spanish I	3

Program Requirements — 27 Hours

CHEM 123	General Chemistry I with Lab	5
ENGR 200	Engineering Seminar	2
MATH 210	Calculus and Analytic Geometry I	5
MATH 211	Calculus and Analytic Geometry II	5
PHYS 211	Engineering Physics I with Lab	5
PHYS 212	Engineering Physics II with Lab	5

Program Electives — 12 Hours

You must check the individual degree requirements at your transfer institution to determine which course is best for your area.

BIO 112	Principles of Biology with Lab	4
BIO 113	Cellular Biology	4
BIO 125	General Biology with Lab	4
BIO 207	Human Anatomy with Lab	4
BIO 208	Human Physiology with Lab	4
BIO 210	Principles of Genetics with Lab	4
CHEM 124	General Chemistry II with Lab	5
CHEM 221	Organic Chemistry I with Lab	5
CIS 120	Programming in Python	3
CIS 155	Programming in C#	3
EASC 118	Environmental Geology	3
EDT 111	Introduction to Engineering Design	3
EDT 115	Advanced Engineering Design	3
EDT 120	Architectural Design	3
EDT 125	Architectural Applications	3
EDT 130	Manufacturing Design I	3
EDT 132	Manufacturing Design II	3
EDT 140	Engineering Design for Industry	3
ENGR 235	Engineering Statics	3
MATH 212	Calculus and Analytic Geometry III	5
MATH 250	Differential Equations	3

Degree Total — 60 Hours

Professional Certificate in Advanced Ag Equipment and Technology

The Professional Certificate in Advanced Ag Equipment and Technology prepares students for skilled employment in the agricultural mechanics and equipment service industry. Building on foundational skills, this program offers advanced training in fuel and emission systems, agricultural transmissions and drives, electrical systems, hydraulics, precision agriculture, and equipment operation. Students engage in hands-on, occupationally relevant learning designed to develop diagnostic, maintenance, and repair skills for today's complex ag machinery.

Program Requirements		35 Hours
AGME 101	Agriculture Equipment Operation	2
AGME 103	Introduction to Precision Agriculture	3
AGME 104	Hydraulic Systems and Diagnostics	4
AGME 205	Ag Fuel and Emissions Systems	4
AGME 202	Agricultural Transmissions and Drives	4
MECH 101	Introduction to Shop Operations	4
MECH 102	Electrical Fundamentals for Mechanics	3
MECH 103	Mobile Heating and Air Conditioning	4
MECH 104	Engine Fundamentals	4
MECH 105	Alternative Fuels	3
Certificate Total		**35 Hours**

Professional Certificate in Agribusiness

The Professional Certificate in Agribusiness is designed to provide the student with business skills specific to agriculture. Career paths such as production agriculture, agricultural lending, commodity marketing, risk management, business management, and agricultural retail sales would be well served by completion of this certificate. Students will learn valuable skills in price risk management through hedging practices, effective management of business resources and leadership of human resources, analyzing economic factors and their relationship to agriculture, basic salesmanship skills, and the impact of agricultural and food policy on the agriculture industry.

Program Requirements		27 Hours
AGRI 107	Foundations of Agriculture	3
AGRI 108	Animal Science	3
AGRI 118	Introduction to Crop Science	3
AGRI 131	Introduction to Agribusiness Systems	3
AGRI 134	Marketing Farm Commodities	3
AGRI 138	Ag Business Management	3
AGRI 175	Occupational Internship	3
CAPP 125	Microcomputer Applications	3
TECH 101	Technical Math	3

Program Electives		3 Hours
AGRI 132	Agriculture Economics	3
ECON 101	Macroeconomics	3
ECON 102	Microeconomics	3

Certificate Total	30 Hours

Professional Certificate in Automotive Technology

The Professional Certificate in Automotive Technology requires satisfactory completion of the 13 core courses within the Automotive Technology program. Students who complete this course of study will learn automotive systems, theory and principles and receive specialized hands-on training using up-to-date industry standard equipment. With this certificate, the student will be prepared to enter the labor force equipped with the knowledge and skills to go to work. In addition, this specialized training enhances the student's chance of securing employment quickly.

Program Requirements		45 Hours
AUTO 106	Power Train Management	4
AUTO 113	Steering, Suspension and Wheels	4
AUTO 115	Automotive Brakes	4
AUTO 118	Automotive Electrical Systems	4
AUTO 175	Automotive Internship	3
AUTO 210	Drive Train Diagnosis & Repair	4
AUTO 225	Advanced Powertrain Systems	4
MECH 101	Introduction to Shop Operations	4
MECH 102	Electrical Fundamentals for Mechanics	3
MECH 103	Mobile Heating and Air Conditioning	4
MECH 104	Engine Fundamentals	4
MECH 105	Alternative Fuels	3

Certificate Total	45 Hours

Professional Certificate in Commercial Applicator

The Professional Certificate in Commercial Applicator is designed to prepare individuals for employment in the agricultural chemical application industry. This program equips students with the technical knowledge, safety practices, and regulatory understanding required to become licensed commercial pesticide applicators. Students will learn proper handling, mixing, and application techniques for herbicides, insecticides, and fungicides across various environments, including agricultural, turf, and ornamental settings. Emphasis is placed on environmental stewardship, equipment calibration, integrated pest management (IPM), and compliance with state and federal laws. Upon completion, students will be prepared to take the Missouri Department of Agriculture's Commercial Applicator Certification Exam and pursue entry-level positions with agricultural retailers, cooperatives, or self-employment opportunities.

Program Requirements		30 Hours
AGME 101	Agriculture Equipment Operation	2
AGRI 118	Introduction to Crop Science	3
AGRI 119	Soils I with Lab	4
AGRI 121	Soils II	3
AGRI 127	Farm Chemicals	3
AGRI 168	Commercial Applicator Licensing	2
AGRI 174	Crop and Insect Scouting	2
AGRI 175	Occupational Internship	3
AGRI 180	Problems in Agriculture	2
AGRI 203	Introduction to Precision Agriculture	3
CDL 201	Ag Transport and CDL Licensing	3
Certificate Total		**30 Hours**

Professional Certificate in Construction Management Technology

The Professional Certificate in Construction Management Technology covers the fundamentals of construction principles and applications. The graduate can apply skills obtained in print reading, construction management, construction materials and methods, construction safety, codes Building and beginning estimating in jobs related to the construction industry. Completion of this certificate will also transition into the Associate of Applied Science in Construction Management Technology.

Program Requirements		30 Hours
CAPP 125	Microcomputer Applications	3
CNST 105	Construction Materials and Methods	3
CNST 106	Construction Estimation	3
CNST 138	Construction Planning and Scheduling	3
CNST 142	Building Mechanical Systems	3
CNST 148	Construction Codes and Law	3
CNST 262	Advanced Construction Safety	3
EDT 105	Print Reading for Construction	3
ENGL 110	Communication for Business and Industry	3
TECH 101	Technical Math	3
Certificate Total		**30 Hours**

Professional Certificate in Criminal Justice

This certificate provides a focused curriculum on the principles and practices of various aspects of the criminal justice world. It covers essential topics such as criminal law, constitutional rights, criminal investigation techniques, and patrol procedures as well as adult corrections. Students develop skills in areas like report writing, evidence collection, and ethical decision-making. The program is ideal for individuals seeking to enter the criminal justice field and for those already working in the field who want to enhance their professional qualifications.

Program Requirements		33 Hours
CJ 101	Introduction to Law Enforcement	3
CJ 102	Introduction to Criminal Justice	3
CJ 103	Traffic Safety and Investigation	3
CJ 105	Criminal Law	3
CJ 111	Introduction to Corrections	3
CJ 115	Procedural Law	3
CJ 118	Criminal Justice Communications	3
CJ 124	Drugs, Society and Criminal Justice	3
CJ 131	Criminal Investigation I	3
CJ 132	Criminal Investigation II	3
COMM 100	Introduction to Communication ***OR***	3
COMM 101	Public Speaking	

Certificate Total	33 Hours

Professional Certificate in Cybersecurity

With well over one million cybersecurity job openings available worldwide, the need for qualified entry-level professionals continues to grow. The Professional Certificate in Cyber Security equips students with the foundational knowledge and hands-on skills required to protect systems, networks, and data from modern threats. This certificate introduces essential security concepts, defensive techniques, and industry-standard tools used by cybersecurity analysts, network defenders, and penetration testers. Students completing this program will be prepared for entry-level cybersecurity roles and for pursuing professional certifications aligned with the field.

Program Requirements		27 Hours
CIS 103	Introduction To Computer Sciences^^	3
CYB 110	Offensive Security^^	3
CYB 120	Defensive Security^^	3
CYB 130	Industrial Cyber Security^^	3
CYB 140	Cloud Security Technologies^^	3
NET 101	Introduction to Networks^^	3
NET 106	Introduction to Network Security^^	3
NET 158	Network Firewalls^^	3
NET 202	Digital Forensics^^	3

Written and Oral Communications		3 Hours
ENGL 101	English Composition I^^	3
ENGL 110	Communication for Business and Industry^^	3
COMM 100	Introduction to Communication^^	3
COMM 101	Public Speaking^^	3

^^*Courses to complete with a grade of C or higher*

Certificate Total	30 Hours

Professional Certificate in Early Childhood Development

Early childhood development involves teaching, inspiring, and nurturing young children ages from birth through age eight (third grade). Students will gain an understanding of the child growth and development and the best practices for evaluating and fostering the child's emotional, social, physical, and cognitive development. Students will learn hands-on skills and preparation for assisting in the childcare environment, creating a supportive learning environment, and developing relationships with children and families.

Program Requirements		30.5 Hours
COMM 101	Public Speaking	3
EDUC 108	Introduction to the Field of Education	0.5
ECD 101	Introduction to Early Childhood^^	3
ECD 103	Child Growth and Development^^	3
ECD 107	Child Nutrition, Health and Safety^^	3
ECD 109	Observation and Planning Assessment^^	3
ECD 111	Language Development Early Literacy^^	3
ECD 115	Child Social/Emotional Development^^	3
ECD 125	Introduction to Special Individuals and Sensory Integration^^	3
ECD 127	Parent/Teacher Interaction^^	3
ECD 129	Administration in Early Childhood Care^^	3

^^Courses to complete with a grade of C or higher

Certificate Total	30.5 Hours

Professional Certificate in Engineering Design Technology

The Professional Certificate in Engineering Design Technology will provide necessary skills and knowledge to obtain employment in the growing, high-demand engineering design field as a designer/drafter in a manufacturing, civil, structural, or architectural environment. The outlook for competent designers is expected to increase faster than average since all new products and buildings require designs and specifications to manufacture, build and assemble. The application of drafting and design standards and skills will be examined with the study of basic to advanced concepts in popular engineering design programs. Completion of this certificate will transition into the Associate of Applied Science in Engineering Design Technology.

Program Requirements		25 Hours
EDT 105	Print Reading for Construction	3
EDT 111	Introduction to Engineering Design	3
EDT 115	Advanced Engineering Design	3
EDT 120	Architectural Design	3
EDT 125	Architectural Applications	3
EDT 130	Manufacturing Design I	3
EDT 132	Manufacturing Design II	3
EDT 140	Engineering Design for Industry	3
SS 120	Employment Strategies	1

Program Electives	6 Hours
Choose any CNST course	
Choose any additional EDT course	
Choose any IEM course	
Choose any MACH course	
Choose any WELD course	

^^*Courses to complete with a grade of C or higher*

Certificate Total	31 Hours

Professional Certificate in Fire Science

The Professional Certificate in Fire Science prepares students to enter an exciting career as a firefighter. All fire specific courses are taught by experienced firefighters and offer the opportunity for current firefighters to upgrade job skills or prepare themselves as supervisors in their departments. It also prepares students who wish to begin a career in firefighting. The Fire Science program offers two tracks of study, a complete two-year associate of applied science degree and a shorter 30 credit hour professional certificate.

Students may receive college credit for current fire service employees based on work experience and prior training. Please contact the program coordinator for more information.

Program Requirements		30 Hours
COMM 100	Introduction to Communication ***OR***	3
COMM 101	Public Speaking	
FIRE 132	Introduction to Emergency Services	3
FIRE 133	Fire Behavior and Combustion	3
FIRE 134	Fire Prevention	3
FIRE 135	Fire Safety and Survival	3
FIRE 136	Building Construction for Fire	3
FIRE 137	Fire Protection Systems	3
FIRE 138	Fire Investigations	3
FIRE 139	Tactics and Strategies	3
FIRE 142	Introduction to Hazardous Materials	3

Certificate Total	30 Hours

Professional Certificate in Heating, Ventilation, Air Conditioning, Refrigeration, and Controls Technology

The Professional Certificate in Heating, Ventilation, Air Conditioning, Refrigeration, and Controls Technology for a Technical Level 1 will provide necessary skills and knowledge to obtain employment as an entry level service technician.

Not all courses are offered every semester. Check with your navigator or the program coordinator. Refer to the course descriptions for prerequisites.

Program Requirements		25 Hours
HVAC 102	HVAC Fundamentals I^^	3
HVAC 104	HVAC Fundamentals II^^	3
HVAC 108	HVAC Motors & Components^^	3
HVAC 110	Refrigeration & Diagnostics^^	3
HVAC 112	Basics in HVAC Electrical^^	3
HVAC 120	Heating Systems	3
HVAC 130	Air Flow Fundamentals	3
HVAC 136	EPA 608	1
IEM 102	Electric Fundamentals^^	3

^^*Courses to complete with a grade of C or higher*

Certificate Total	25 Hours

Professional Certificate in IT Systems Administration

The Professional Certificate in IT Systems Administration is designed to prepare students for intermediate-level roles in network and systems administration. This program builds upon foundational IT knowledge to develop skills in managing servers, configuring network infrastructure, implementing directory services, and securing enterprise environments. Students gain hands-on experience working with real-world networking and server technologies that support modern business operations. Graduates will be prepared for roles such as systems administrator, network technician, or IT infrastructure specialist, and will be well-positioned to pursue advanced industry certifications.

General Education Requirements — 3 Hours

Written and Oral Communications — 3 Hours

COMM 100	Introduction to Communication^^	3
COMM 101	Public Speaking^^	3
ENGL 101	English Composition I^^	3
ENGL 110	Communication for Business and Industry^^	3

Program Requirements — 27 Hours

CIS 103	Introduction To Computer Sciences^^	3
NET 101	Introduction to Networks^^	3
NET 102	Networking Essentials^^	3
NET 103	Routing and Switching Essentials^^	3
NET 106	Introduction to Network Security^^	3
NET 120	Network Server^^	3
NET 126	Network Client^^	3
NET 142	PC Operating Systems^^	3
NET 203	Enterprise Networks, Security, and Automation^^	3

^^Courses to complete with a grade of C or higher

Certificate Total — 30 Hours

Professional Certificate in Machine Tool Technology

The Professional Certificate in Machine Tool Technology gives the student machine shop skills, including conventional and CNC machining processes. There is a strong emphasis on preparing the students for entry-level employment in the machine shop industry, including computer numerical controlled (CNC) operators and setup, manual machinists, computer aided drafting (CAD) and computer aided manufacturing (CAM) users, and inspectors.

Program Requirements		38 Hours
ENGL 110	Communication for Business and Industry	3
MACH 101	Introduction to Machining^^	4
MACH 102	Lathe and Milling Machine Operations^^	4
MACH 103	Milling and Grinding Machine Applications^^	4
MACH 105	Metrology^^	4
MACH 111	Introduction to CNC Machining^^	4
MACH 117	Introduction to CNC Programming^^	4
MACH 118	Intermediate CNC Machining^^	4
MACH 134	Computer Aided Manufacturing^^	4
TECH 101	Technical Math	3

^^Courses to complete with a grade of C or higher

Certificate Total	38 Hours

Professional Certificate in Medical Assisting

The Professional Certificate in Medical Assisting provides seamless transition after completion of the Skills Certificate. Courses are online with one four-hour skills lab each week on-ground learning clinical and laboratory skills. Students must complete a minimum of 160 clinical hours as part of the capstone course. The program provides theory, laboratory practice, and clinical application to meet student learning outcomes. Students are exposed to diverse opportunities In Medical Assisting to build on skills achieved during the Skills Certificate in Medical Assisting. Students have the opportunity to test for their NHA Certified Phlebotomy Technician (CPT) and Certified Clinical Medical Assistant (CCMA). In the employment setting, Medical Assisting certification is preferred, and in many cases mandatory.

Program Requirements		31 Hours
HEOC 135	Allied Health Career Development^^	0.5
MEA 101	Introduction to Medical Assisting^	3
MEA 103	Exploration of the Human Body^^	3
MEA 108	Medical Assisting Administrative Procedures^	3
MEA 109	Pharmacology Basics^^	3
MEA 110	Medical Scribe^^	2
MEA 112	Medical Assisting Clinical Procedures^	3
MEA 114	Medical Assisting Advanced Skills^	4
MEA 116	Medical Assisting Laboratory Procedures^	3
MEA 190	Medical Assisting Capstone^	6
NURS 102	CPR for Health Care Providers	0.5

^Courses to complete with a grade of B or higher

^^Courses to complete with a grade of C or higher

Certificate Total	31 Hours

Professional Certificate in Medical Coding

The Professional Certificate in Medical Coding will prepare students for The American Health Information Management Association (AHIMA) certification exam to become a certified coder. Medical coders assign a code to each diagnosis and procedure by using classification systems. The classification system determines the amount for which health care providers will be reimbursed if the patient is covered by Medicare, Medicaid, or other insurance programs using the system.

Program Requirements		30.5 Hours
BIO 103	Human Biology^^	3
HEOC 119	Medical Terminology^^	3
HEOC 135	Allied Health Career Development^^	0.5
HIT 100	Introduction to Health Information Technology	3
HIT 105	Health Care Technologies^^	3
HIT 115	Health Care and the Law	3
HIT 204	Coding I^^	3
HIT 206	Coding II^^	3
HIT 208	Coding III^^	3
HIT 215	Principles of Health Care Reimbursement^^	3
HIT 224	Human Disease and Conditions^^	3

^^*Courses to complete with a grade of C or higher*

Certificate Total	30.5 Hours

Professional Certificate in Manufacturing Production Technician

The Professional Certificate in Manufacturing Production Technician prepares students for entry into production employment with a solid foundation of manufacturing processes, safety, quality, operations and maintenance functions. The four CPT courses have a certification assessment through the Manufacturing Skill Standards Council (MSSC). Through MSSC students will earn a certificate for each of the four assessments successfully completed, and students who successfully complete all four assessments are awarded the Certified Production Technician (CPTAE) from MSSC. The CPT is recognized by the National Association of Manufacturers (NAM). This certificate can be accepted as part of the technical requirements for the AAS in Industrial Technology with Emphasis in Electrical Maintenance.

Program Requirements		31 Hours
ENGL 110	Communication for Business and Industry ^^	3
IEM 102	Electric Fundamentals^^	3
IEM 104	Electrical Power^^	3
IEM 122	Introduction to PLCs^^	3
IEM 124	Intermediate PLCs^^	3
IEM 126	Industrial Safety^^	3
IEM 128	Maintenance Management^^	3
IEM 136	General NEC Requirements^^	3
MACH 101	Introduction to Machining^^	4
WELD 120	Shielded Metal Arc Welding I^^	3

^^Courses to complete with a grade of C or higher

Certificate Total	31 Hours

Professional Certificate in Nurse Aide

The Professional Certificate in Nurse Aide consists of a combination of the Skills Certificate in Nurse Aide along with other health care related classes. Students can increase employability with completion of this certificate.

Program Requirements		31.5 Hours
BHS 200	Introduction to Behavioral Health Support	3
BIO 103	Human Biology	3
ENGL 110	Communication for Business and Industry ^^	3
HEOC 119	Medical Terminology^^	3
HEOC 152	Certified Nurse Assistant^^	6
HEOC 155	Certified Nurse Assistant Clinical	2
HEOC 158	Certified Medication Technician^^	4
HEOC 160	Certified Medication Technician Clinical	1
HIT 105	Health Care Technologies	3
NURS 102	CPR for Health Care Providers	0.5
SS 104	College Skills	3

^^*Courses to complete with a grade of C or higher*

Certificate Total	31.5 Hours

Professional Certificate in Pharmacy Technician

The Professional Certificate in Pharmacy Technician consists of a combination of the Skills Certificate in Pharmacy Technician along with other health care related courses. Students can increase employability with completion of this certificate.

Program Requirements		30 Hours
BHS 200	Introduction to Behavioral Health Support^^	3
HEOC 119	Medical Terminology^^	3
PHRM 102	Top 200 Medications^^	1
PHRM 104	Calculations for Pharmacy Technician^^	3
PHRM 106	Role of the Pharmacy Technician^^	3
PHRM 109	Pharmacology^^	3
PHRM 110	Federal Law and Ethics in Pharmacy Practice^^	2
PHRM 115	Pharmacy Technician Certification^^	3
PHRM 122	Advanced Top 200 and Over-the-Counter Medications^^	3
PHRM 124	Inventory Control and Financial Issues in Pharmacy^^	3
PHRM 175	Professional Practical Experience^^	3

^^*Courses to complete with a grade of C or higher*

Certificate Total	30 Hours

Professional Certificate in Pipe Welding

The Professional Certificate in Pipe Welding is for students who want to learn the skills of pipe welding. The course follows the American Society of Mechanical Engineers (ASME) section 9 codes. The course involves Shielded Metal Arc Welding (SMAW) and Gas Tungsten Arc Welding (GTAW) of pipe in the 2G, 5G, and 6G positions. The successful student will be eligible for up to six ASME section 9 qualifications in pipe. In the classroom the student will learn the technological information associated with the pipe welding process and how to apply that information to practical use on the job. This program meets the needs of both the beginning and experienced welders who are seeking certification/qualifications in pipe welding.

Welders need good eyesight, hand-eye coordination and manual dexterity. Students should be able to concentrate on detailed work for long periods and must be able to lift up to 45 pounds, bend, stoop, crawl, kneel, climb ladders, and work in awkward and cramped positions.

All students should be aware welding fumes produce a chemical known to the state of California to cause cancer and birth defects (or other reproductive harm). Students should review the Material Data Safety Sheets (MSDS) available in the welding department located in the Fielding Technical Center, Room 270, to be aware of the hazards of welding fumes.

General Education Requirements — 3 Hours

Mathematical Sciences — 3 Hours

TECH 101	Technical Math	3
Choose any course MATH 110 or higher		3

^^*Courses to complete with a grade of C or higher*

Program Requirements — 34 Hours

CNST 262	Advanced Construction Safety	3
WELD 114	Structural Layout and Fabrication^^	3
WELD 116	Print Reading for Welders^^	3
WELD 120	Shielded Metal Arc Welding I^^	3
WELD 122	Shielded Metal Arc Welding II - Structural^^	3
WELD 124	Shielded Metal Arc Welding III - Pipe^^	4
WELD 126	Gas Metal/Flux Core Arc Welding I^^	3
WELD 128	Gas Metal/Flux Core Arc Welding II - Structural^^	3
WELD 132	Gas Tungsten Arc Welding I^^	2
WELD 134	Gas Tungsten Arc Welding II^^	3
WELD 136	Gas Tungsten Arc Welding III^^	4

Certificate Total — 37 Hours

Professional Certificate in Practical Nursing

Program Prerequisites 14 Hours

Written Communications 3 Hours

ENGL 101	English Composition I^^	3
ENGL 102	English Composition II^^	3

Mathematical Sciences 3 Hours

MATH 110	Intermediate Algebra with Review^^	5
MATH 112	Intermediate Algebra^^	3
MATH 113	Mathematical Reasoning and Modeling^^	3
MATH 114	Precalculus Algebra^^	3
MATH 119	Statistical Reasoning^^	3

Natural Sciences 8 Hours

BIO 207	Human Anatomy with Lab^	4
BIO 208	Human Physiology with Lab^*	4

^^*Courses to complete with a grade of C or higher*

Year One (Level 1)

All science courses must have been completed within the last 10 years at the time of application to the Nursing program.

Program Requirements 41.5 Hours

Each eight-week session of nursing must be successfully completed to take the next eight-week courses.

PSY 101	General Psychology^^*	3
HEOC 135	Allied Health Career Development^	0.5
NURS 102	CPR for Health Care Providers	0.5
NURS 110	Personal Vocational Concepts	1
NURS 112	Introduction to Psycho-Social Health	2
NURS 114	Fundamentals I	2
NURS 117	Fundamentals II	3
NURS 118	Fundamentals II Clinical	1.5
NURS 119	Allied Health Pharmacology I	3
NURS 122	Adult Health I	4
NURS 124	Adult Health II	4
NURS 126	Adult Health Clinical	3
NURS 128	Adult Health III	2
NURS 129	Allied Health Pharmacology II	3
NURS 130	Adult Health Care Coordination Clinical	2
NURS 134	Nursing Care Childbearing Family	2
NURS 136	Childbearing Family Clinical	1.5
NURS 140	Nursing Care Child Rearing Family	2
NURS 142	Child Rearing Family Clinical	1.5

Certificate Total 55.5 Hours

Professional Certificate in Total Productive Maintenance

The Professional Certificate in Total Productive Maintenance is designed to prepare students as industrial maintenance technologists or millwrights for employment in commercial, production, manufacturing, and other industrial settings. Inclusion of major maintenance disciplines of fluid power, mechanics, electrical, and PLC controls results in a comprehensive knowledge and skill base, with emphasis on safety, reliability, predictive, and preventive maintenance. Competency is gained in interpreting and utilizing electrical and fluid power schematics for troubleshooting, as well as PLC functions and programming. This certificate is fully accepted as part of the technical requirements for the Associate of Applied Science in Industrial Technology with Emphasis in Electrical Maintenance and comprises the recommended courses students should pursue in the first two semesters.

Program Requirements		30 Hours
IEM 102	Electric Fundamentals^^	3
IEM 104	Electrical Power^^	3
IEM 106	Industrial Mechanics^^	3
IEM 108	Fluid Power Technology^^	3
IEM 112	Control Circuit Troubleshooting^^	3
IEM 114	Motor Controls^^	3
IEM 122	Introduction to PLCs^^	3
IEM 124	Intermediate PLCs^^	3
IEM 126	Industrial Safety^^	3
IEM 128	Maintenance Management^^	3

^^Courses to complete with a grade of C or higher

Certificate Total	30 Hours

Professional Certificate in Total Productive Maintenance

The Professional Certificate in Total Productive Maintenance is designed to prepare students as industrial maintenance technologists or millwrights for employment in commercial, production, manufacturing, and other industrial settings. Inclusion of major maintenance disciplines of fluid power, mechanics, electrical, and PLC controls results in a comprehensive knowledge and skill base, with emphasis on safety, reliability, predictive, and preventive maintenance. Competency is gained in interpreting and utilizing electrical and fluid power schematics for troubleshooting, as well as PLC functions and programming. This certificate is fully accepted as part of the technical requirements for the Associate of Applied Science in Industrial Technology with Emphasis in Electrical Maintenance and comprises the recommended courses students should pursue in the first two semesters.

Program Requirements		33 Hours
IEM 102	Electric Fundamentals^^	3
IEM 104	Electrical Power^^	3
IEM 107	Introduction to Robotics	3
IEM 109	Robotics Automation Technician I	3
IEM 112	Control Circuit Troubleshooting^^	3
IEM 114	Motor Controls^^	3
IEM 122	Introduction to PLCs^^	3
IEM 124	Intermediate PLCs^^	3
IEM 126	Industrial Safety	3
IEM 132	Advanced PLCs	3
IEM 134	PLC Networks	3

^^*Courses to complete with a grade of C or higher*

Certificate Total	33 Hours

Professional Certificate in Software Development

The Professional Certificate in Software Development prepares students for work in modern programming environments by building strong technical and problem-solving skills. Through hands-on projects and practical exercises, students learn intermediate programming techniques, object-oriented design, data handling, debugging strategies, and software development workflows used in industry. Coursework emphasizes writing clean, maintainable code; designing user-focused applications; and using contemporary development tools to build and test software. Graduates of this certificate will be able to create functional applications, contribute effectively to team-based projects, and demonstrate job-ready skills through a professional portfolio of completed work.

General Education Requirements — 6 Hours

Mathematical Sciences — 3 Hours

TECH 101	Technical Math^^	3
Choose any course MATH 110 or higher^^		3

Written and Oral Communications — 3 Hours

ENGL 101	English Composition I^^	3
ENGL 110	Communication for Business and Industry^^	3
COMM 100	Introduction to Communication^^	3
COMM 101	Public Speaking^^	3

^^Courses to complete with a grade of C or higher

Program Requirements — 24 Hours

CAPP 125	Microcomputer Applications^^	3
CIS 103	Introduction To Computer Sciences^^	3
CIS 120	Programming in Python^^	3
CIS 124	Database Management^^	3
CIS 155	Programming in C#^^	3
CIS 157	Advanced C# with AI^^	3
CIS 161	Systems Analysis^^	3
CIS 174	Programming in C# with SQL^^	3

Certificate Total — 30 Hours

Professional Certificate in Software Development

The Professional Certificate in Software Development prepares students for work in modern programming environments by building strong technical and problem-solving skills. Through hands-on projects and practical exercises, students learn intermediate programming techniques, object-oriented design, data handling, debugging strategies, and software development workflows used in industry. Coursework emphasizes writing clean, maintainable code; designing user-focused applications; and using contemporary development tools to build and test software. Graduates of this certificate will be able to create functional applications, contribute effectively to team-based projects, and demonstrate job-ready skills through a professional portfolio of completed work.

Program Requirements		30 Hours
CAPP 125	Microcomputer Applications	3
CAPP 162	Desktop Publishing^^	3
CIS 103	Introduction To Computer Sciences^^	3
CIS 158	JAVA^^	3
WEB 103	Introduction to Web Development^^	3
WEB 116	Web Development^^	3
WEB 118	Digital Imaging^^	3
WEB 119	Digital Illustration^^	3
WEB 120	XML^^	3
WEB 160	Portfolio Design^^	3

^^Courses to complete with a grade of C or higher

Certificate Total	30 Hours

Professional Certificate in Pipe Welding

The Professional Certificate in Pipe Welding is for students who want to learn the skills of pipe welding. The course follows the American Society of Mechanical Engineers (ASME) section 9 codes. The course involves Shielded Metal Arc Welding (SMAW) and Gas Tungsten Arc Welding (GTAW) of pipe in the 2G, 5G, and 6G positions. The successful student will be eligible for up to six ASME section 9 qualifications in pipe. In the classroom the student will learn the technological information associated with the pipe welding process and how to apply that information to practical use on the job. This program meets the needs of both the beginning and experienced welders who are seeking certification/qualifications in pipe welding.

Welders need good eyesight, hand-eye coordination and manual dexterity. Students should be able to concentrate on detailed work for long periods and must be able to lift up to 45 pounds, bend, stoop, crawl, kneel, climb ladders, and work in awkward and cramped positions.

All students should be aware welding fumes produce a chemical known to the state of California to cause cancer and birth defects (or other reproductive harm). Students should review the Material Data Safety Sheets (MSDS) available in the welding department located in the Fielding Technical Center, Room 270, to be aware of the hazards of welding fumes.

General Education Requirements — 3 Hours

Mathematical Sciences — 3 Hours

TECH 101	Technical Math	3
Choose any course MATH 110 or higher		3

^^*Courses to complete with a grade of C or higher*

Program Requirements — 38 Hours

CNST 262	Advanced Construction Safety^^	3
WELD 114	Structural Layout and Fabrication^^	3
WELD 116	Print Reading for Welders^^	3
WELD 120	Shielded Metal Arc Welding I^^	3
WELD 122	Shielded Metal Arc Welding II - Structural^^	3
WELD 124	Shielded Metal Arc Welding III - Pipe^^	4
WELD 126	Gas Metal/Flux Core Arc Welding I^^	3
WELD 128	Gas Metal/Flux Core Arc Welding II - Structural^^	3
WELD 132	Gas Tungsten Arc Welding I^^	2
WELD 134	Gas Tungsten Arc Welding II^^	3
WELD 136	Gas Tungsten Arc Welding III^^	4
WELD 160	Advanced Pipe Fitting and Structural Fabrication^’	4

Certificate Total — 41 Hours

Skills Certificate in Applied Ag Systems Technology

The Applied Ag Systems Technology Skills Certificate prepares students for high-demand, entry-level careers in agricultural mechanics and equipment service. This program provides handson, technical training in key areas such as electrical systems, engine fundamentals, agricultural equipment operation, precision agriculture technologies, and hydraulic systems and diagnostics. Students develop real-world skills needed to operate, maintain, and troubleshoot modern ag machinery and systems. The certificate supports workforce readiness in alignment with local and regional industry needs and provides a pathway to advanced certificates or degree programs.

Program Requirements		16 Hours
AGME 101	Agriculture Equipment Operation^^	2
AGME 104	Hydraulic Systems and Diagnostics^^	4
AGRI 203	Introduction to Precision Agriculture^^	3
MECH 102	Electrical Fundamentals for Mechanics^^	3
MECH 104	Engine Fundamentals^^	4

^^*Courses to complete with a grade of C or higher*

Certificate Total	16 Hours

Skills Certificate in Automotive Maintenance & Light Repair

The Automotive Skills Certificate provides students with foundational knowledge and hands-on experience in basic automotive concepts. This 16-credit-hour program introduces essential systems, tools, and techniques used in the automotive industry. Students will gain practical experience with industry-standard equipment while learning fundamental automotive theory, maintenance, and repair procedures. Upon completion, students will be prepared for entry-level employment or for continued study in the Automotive Technology program.

Program Requirements		16 Hours
AUTO 106	Power Train Management^^	4
AUTO 113	Steering, Suspension and Wheels^^	4
AUTO 115	Automotive Brakes^^	4
AUTO 118	Automotive Electrical Systems^^	4

^^*Courses to complete with a grade of C or higher*

Certificate Total	16 Hours

Professional Certificate in Software Development

The Professional Certificate in Software Development prepares students for work in modern programming environments by building strong technical and problem-solving skills. Through hands-on projects and practical exercises, students learn intermediate programming techniques, object-oriented design, data handling, debugging strategies, and software development workflows used in industry. Coursework emphasizes writing clean, maintainable code; designing user-focused applications; and using contemporary development tools to build and test software. Graduates of this certificate will be able to create functional applications, contribute effectively to team-based projects, and demonstrate job-ready skills through a professional portfolio of completed work.

General Education Requirements — 6 Hours

Mathematical Sciences — 3 Hours

TECH 101	Technical Math^^	3
Choose any course MATH 110 or higher^^		3

Written and Oral Communications — 3 Hours

ENGL 101	English Composition I^^	3
ENGL 110	Communication for Business and Industry^^	3
COMM 100	Introduction to Communication^^	3
COMM 101	Public Speaking^^	3
COMM 105	Interpersonal Communication^^	3

^^*Courses to complete with a grade of C or higher*

Program Requirements — 12 Hours

CIS 103	Introduction To Computer Sciences^^	3
CIS 120	Programming in Python^^	3
CIS 124	Database Management^^	3
CIS 155	Programming in C#^^	3

Certificate Total — 18 Hours

Skills Certificate in Construction Management Technology

The Skills Certificate in Construction Management Technology provides students with a foundational introduction to construction industry practices. The program focuses on essential entry-level skills including construction terminology, basic print reading, construction materials and methods, and safe work practices. Students gain familiarity with industry expectations, jobsite culture, and the roles of construction team members. Completion of this certificate prepares students for entry-level employment in construction-related settings and provides a direct pathway into the Professional Certificate and the Associate of Applied Science in Construction Management Technology.

Program Requirements		18 Hours
CAPP 125	Microcomputer Applications^^	3
CNST 105	Construction Materials and Methods^^	3
CNST 113	Construction Management^^	3
CNST 148	Construction Codes and Law^^	3
CNST 262	Advanced Construction Safety^^	3
EDT 105	Print Reading for Construction^^	3

^^*Courses to complete with a grade of C or higher*

Certificate Total	18 Hours

Skills Certificate in Conservation and Natural Resource Management

The Skills Certificate in Conservation and Natural Resource Management prepares students for entry-level employment and field support roles in parks, forests, wildlife areas, and other natural resource settings. The program focuses on practical, hands-on skills used in conservation work, including habitat stewardship, resource monitoring, land management practices, and environmental sustainability.

Students develop foundational knowledge of natural ecosystems, conservation principles, and outdoor resource management while building technical and professional skills valued by public agencies and private land management organizations. This certificate is designed for individuals seeking careers such as park staff, conservation technicians, forest or trail workers, or other outdoor resource support positions, as well as those interested in continuing their education in natural resources or environmental fields.

Program Requirements		16 Hours
AGRI 113	Introduction to Fish and Wildlife Management^^	3
AGRI 118	Introduction to Crop Science^^	3
AGRI 119	Soils I with Lab^^	4
AGRI 125	Natural Resources^^	3
BIO 105	Introduction to Ecology^^	3

^^Courses to complete with a grade of C or higher

Certificate Total	16 Hours

Skills Certificate in Digital Media Communications

The Skills Certificate in Digital Media Communications is designed to retrain professionals on principles in marketing, public relations, and imaging within the realm of new technologies, including blogs, podcasts, video production, websites, and social media platforms.

Program Requirements		12 Hours
BSMT 122	Digital Marketing Essentials^^	3
COMM 112	Introduction to Public Relations^^	3
COMM 201	Writing Across the Media^^	3
COMM 215	Introduction to Social Media Management^^	3

Program Electives		6 Hours
ART 160	Introduction to Graphic Design^^	3
ART 162	Digital Photography^^	3
COMM 161	Media Productions I^^	3
WEB 116	Web Development^^	3
WEB 118	Digital Imaging^^	3

^^Courses to complete with a grade of C or higher

Certificate Total	18 Hours

Skills Certificate in Digital Video

Students who complete the Skills Certificate in Digital Video will be able to film, edit, and produce video content for personal or commercial applications, including small business, corporate, and non-profit needs.

Program Requirements		18 Hours
ART 162	Digital Photography^^	3
COMM 161	Media Productions I^^	3
COMM 162	Media Productions II^^	3
COMM 163	Digital Video Editing^^	3
COMM 164	Digital Storytelling^^	3
COMM 165	Graphics for Video^^	3

^^Courses to complete with a grade of C or higher

Certificate Total	18 Hours

Skills Certificate in Early Childhood Development

Early childhood development involves teaching, inspiring, and nurturing young children ages from birth through age eight (third grade). Students will gain an understanding of the child growth and development and the best practices for evaluating and fostering the child's emotional, social, physical, and cognitive development. Students will learn hands-on skills and preparation for assisting in the childcare environment, creating a supportive learning environment, and developing relationships with children and families.

Program Requirements		18.5 Hours
EDUC 108	Introduction to the Field of Education	0.5
ECD 101	Introduction to Early Childhood^^	3
ECD 107	Child Nutrition, Health and Safety^^	3
ECD 109	Observation and Planning Assessment^^	3
ECD 125	Introduction to Special Individuals and Sensory Integration^^	3
ECD 127	Parent/Teacher Interaction^^	3
ECD 131	Child Development Portfolio/Assessment Preparation^^	3

^^Courses to complete with a grade of C or higher

Certificate Total	18.5 Hours

Skills Certificate in Electro-Mechanical Technology

The Skills Certificate in Electro-Mechanical Technology provides new and existing maintenance technicians with state-of-the-art skills in maintaining and troubleshooting industrial electricity and mechanical devices.

Program Requirements		18 Hours
IEM 102	Electric Fundamentals^^	3
IEM 104	Electrical Power^^	3
IEM 106	Industrial Mechanics^^	3
IEM 108	Fluid Power Technology^^	3
IEM 122	Introduction to PLCs^^	3
IEM 124	Intermediate PLCs^^	3

^^Courses to complete with a grade of C or higher

Certificate Total	18 Hours

Skills Certificate in First Line Supervision in Office Support

The first line manager is the bridge between the line staff and management. This certificate is designed to provide front line employees with the skills necessary to transition to a supervisory role. Students will gain knowledge in the areas of leadership, human relations, communication, and functions of business.

Program Requirements		16 Hours
BSMT 108	Principles of Management	3
BSMT 119	Customer Service Management	3
BSMT 125	Human Relations	3
CAPP 125	Microcomputer Applications	3
ENGL 110	Communication for Business and Industry	3
SS 120	Employment Strategies	1

Certificate Total	16 Hours

Skills Certificate in First Line Supervision in Production

The first line manager is the bridge between the line staff and management. This certificate is designed to provide front line employees with the skills necessary to transition to a supervisory role. Students will gain knowledge in the areas of leadership, human relations, communication, and quality.

Program Requirements		16 Hours
BSMT 108	Principles of Management	3
BSMT 119	Customer Service Management	3
CAPP 125	Microcomputer Applications	3
CIS 185	Project Management	3
IEM 146	Quality Management and Control	3
SS 120	Employment Strategies	1

Certificate Total	16 Hours

Skills Certificate in First Line Supervision in Retail

The first line manager is the bridge between the line staff and management. This certificate is designed to provide front line employees with the skills necessary to transition to a supervisory role. Students will gain knowledge in the areas of leadership, human relations, communication, and customer service.

Program Requirements		16 Hours
BSMT 108	Principles of Management	3
BSMT 119	Customer Service Management	3
BSMT 122	Digital Marketing Essentials	3
BSMT 125	Human Relations	3
CAPP 125	Microcomputer Applications	3
SS 120	Employment Strategies	1

Certificate Total	16 Hours

Skills Certificate in First Line Supervision in Heating, Ventilation, Air Conditioning, Refrigeration, and Controls Technology

The Skills Certificate in Heating, Ventilation, Air Conditioning, Refrigeration, and Controls Technology provides fundamental training in HVAC/R theory and the tools and equipment that are used by a technician. Students will also have the skill set to be able to understand electrical theory, as well as the practical understanding of how to troubleshoot and diagnose HVAC/R systems, with refrigeration and electrical, in order to be prepared for the next level certification, internship, and/or apprenticeship employment.

Program Requirements		19 Hours
HVAC 102	HVAC Fundamentals I^^	3
HVAC 104	HVAC Fundamentals II^^	3
HVAC 108	HVAC Motors & Components^^	3
HVAC 110	Refrigeration & Diagnostics^^	3
HVAC 112	Basics in HVAC Electrical^^	1
HVAC 136	EPA 608	3
IEM 102	Electric Fundamentals^^	3

^^Courses to complete with a grade of C or higher

Certificate Total	19 Hours

Skills Certificate in IT Support Specialist

The Skills Certificate in IT Support Specialist is designed to prepare students for entry into the information technology field. This program provides a strong foundation in computer hardware, operating systems, networking fundamentals, and directory services. Students gain hands-on experience setting up, managing, and troubleshooting systems in environments that mirror today's workplace technology. Graduates will be prepared for entry-level positions such as help desk technician, computer support specialist, or IT support assistant.

General Education Requirements — 3 Hours

Written and Oral Communications — 3 Hours

COMM 100	Introduction to Communication	3
COMM 101	Public Speaking	3
ENGL 101	English Composition I	3
ENGL 110	Communication for Business and Industry	3

Program Requirements — 15 Hours

CIS 103	Introduction To Computer Sciences^^	3
NET 101	Introduction to Networks^^	3
NET 102	Networking Essentials	3
NET 106	Introduction to Network Security^^	3
NET 142	PC Operating Systems^^	3

^^Courses to complete with a grade of C or higher

Certificate Total — 18 Hours

Skills Certificate in Law Enforcement

This certificate provides a focused curriculum on the principles and practices of law enforcement. It covers essential topics such as criminal law, constitutional rights, criminal investigation techniques, and patrol procedures. Students develop skills in areas like report writing, evidence collection, and ethical decision-making. The program is ideal for individuals seeking to enter the field as a law enforcement officer and for those already working in the field who want to enhance their professional qualifications.

Program Requirements		18 Hours
CJ 101	Introduction to Law Enforcement	3
CJ 102	Introduction to Criminal Justice	3
CJ 103	Traffic Safety and Investigation	3
CJ 105	Criminal Law	3
CJ 115	Procedural Law	3
CJ 131	Criminal Investigation I ***OR***	3
CJ 132	Criminal Investigation II	

Certificate Total	18 Hours

Skills Certificate in Machinist Level I

The Skills Certificate in Machinist Level I is designed for the student who wants to get into the manufacturing workforce as soon as possible. Upon completion of the certificate, students will gain knowledge and exposure to various styles of machining, including manual and computer numerical controlled (CNC) machining. The certificate also allows students to gain certifications from the National Institute for Metal Working Skills (NIMS). This 18-credit hour program can be completed in one semester and provides entry-level experience and fundamental skills.

Machinists need good eyesight, hand-eye coordination and manual dexterity. Students need to be able to concentrate for long periods of time as well as lift up to 45 pounds, bend, stoop, and kneel.

Program Requirements		18 Hours
ENGL 110	Communication for Business and Industry	3
MACH 101	Introduction to Machining^^	4
MACH 105	Metrology^^	4
MACH 111	Introduction to CNC Machining^^	4
TECH 101	Technical Math	3

^^Courses to complete with a grade of C or higher

Certificate Total	18 Hours

Skills Certificate in Architectural Design

The Skills Certificate in Architectural Design provides necessary skills and knowledge to obtain employment in the growing, highdemand engineering design field as a designer/drafter in an architectural environment. The outlook for competent designers is expected to increase faster than average since all new buildings require designs and specifications to manufacture, build and assemble. The application of engineering and design standards and skills will be examined with the study of basic to advanced concepts in popular engineering design programs. Completion of this certificate will transition into the Professional Certificate in Engineering Design Technology.

Program Requirements		13 Hours
CNST 162	Construction Safety	3
EDT 105	Print Reading for Construction	3
EDT 111	Introduction to Engineering Design	3
EDT 120	Architectural Design	3
SS 120	Employment Strategies	1

Program Electives		3 Hours
Choose any CNST course		
EDT 115	Advanced Engineering Design	3
EDT 125	Architectural Applications	3
EDT 130	Manufacturing Design I	3

Certificate Total	16 Hours

Skills Certificate in Mechanical Design

The Skills Certificate in Mechanical Design provides necessary skills and knowledge to obtain employment in the growing, highdemand engineering design field as a designer/drafter in a manufacturing and engineering environment. The outlook for competent designers is expected to increase faster than average since all new products require designs and specifications to manufacture, build and assemble. The application of drafting and design standards and skills will be examined with the study of basic to advanced concepts in popular engineering design programs. Completion of this certificate will transition into the Professional Certificate in Engineering Design Technology.

Program Requirements		13 Hours
CNST 162	Construction Safety	3
EDT 105	Print Reading for Construction	3
EDT 111	Introduction to Engineering Design	3
EDT 130	Manufacturing Design I	3
SS 120	Employment Strategies	1

Program Electives		3 Hours
Choose any MACH course		
Choose any WELD course		
EDT 115	Advanced Engineering Design	3
EDT 120	Architectural Design	3
EDT 132	Manufacturing Design II	3

Certificate Total	16 Hours

Skills Certificate in Basic Mechanical Systems

The Basic Mechanical Systems Certificate introduces students to fundamental skills required in the transportation and equipment service industries. Through hands-on training and classroom instruction, students learn the basics of shop operations, electrical systems, engine fundamentals, mobile heating and air conditioning, and alternative fuels. This shortterm program is ideal for those seeking entrylevel employment in agricultural, diesel, or automotive mechanics or for students looking to build a strong foundation for more advanced technical training.

Program Requirements		18 Hours
MECH 101	Introduction to Shop Operations^^	4
MECH 102	Electrical Fundamentals for Mechanics^^	3
MECH 103	Mobile Heating and Air Conditioning^^	4
MECH 104	Engine Fundamentals^^	4
MECH 105	Alternative Fuels^^	3

^^*Courses to complete with a grade of C or higher*

Certificate Total	18 Hours

Skills Certificate in Medical Assisting

The Skills Certificate in Medical Assisting is an online program with four hours a week in a lab or clinical setting on-ground. The program provides theory, laboratory practice, and clinical application to meet student-learning outcomes. Students are introduced to diverse opportunities in medical assisting to achieve entry–level performance as a medical assistant. Students will be cross-trained in administrative and clinical skills, as well as patient privacy, sensitivity and empathy. Skills include patient intake, vital signs, electrocardiograms (EKGs), sterile field, administering injections, assisting with physical exams, scheduling patients and health insurance requirements. Students will take the NHA Certified EKG Technician (CET) credentialing exam before course completion.

***Skills certificate programs with less than 16 credit hours may not be eligible for Title IV Federal Student Aid.**

Program Requirements		15.5 Hours
MEA 101	Introduction to Medical Assisting^	3
MEA 103	Exploration of the Human Body^^	3
MEA 108	Medical Assisting Administrative Procedures^	3
MEA 112	Medical Assisting Clinical Procedures^	3
MEA 116	Medical Assisting Laboratory Procedures^	3
NURS 102	CPR for Health Care Providers	0.5

^Courses to complete with a grade of B or higher

^^Courses to complete with a grade of C or higher

Certificate Total	15.5 Hours

Skills Certificate in Nurse Aide

The Skills Certificate in Nurse Aide is designed to provide a student with the training to become a Certified Nurse Assistant (CNA) and Certified Medication Technician (CMT). The courses are offered on-ground and online, and clinicals are on-site at an approved long-term care facility.

A CNA works closely with nurses and the health care team. The nurse assistant must be skilled in the actual procedures being performed; have a strong grasp of emergency procedures; be able to stay calm in stressful situations, and be able to observe a patient's condition and report that information back to the nurse. Tasks may include turning and repositioning bedridden patients; helping patients exercise and move in and out of bed; preparing patients for surgery, treatment or examination; applying dressing, and transporting patients to treatment units.

The CMT training prepares a student to work in long-term care facilities. The program teaches skills in administration of nonparenteral (oral or by inhalation) medications and in assisting RNs or LPNs with medication therapy.

Program Requirements		16.5 Hours
HEOC 119	Medical Terminology^^	3
HEOC 152	Certified Nurse Assistant^^	6
HEOC 155	Certified Nurse Assistant Clinical	2
HEOC 158	Certified Medication Technician^^	4
HEOC 160	Certified Medication Technician Clinical	1
NURS 102	CPR for Health Care Providers	0.5

^^*Courses to complete with a grade of C or higher*

Certificate Total	16.5 Hours

Skills Certificate in Pharmacy Technician

The Skills Certificate in Pharmacy Technician provides the knowledge and skills to prepare students with no pharmacy background to take the Pharmacy Technician Certificate Board Examination (PTCE) to achieve CPhT designation.

***Skills certificate programs with less than 16 credit hours may not be eligible for Title IV Federal Student Aid.**

Program Requirements		15 Hours
HEOC 119	Medical Terminology^^	3
PHRM 102	Top 200 Medications^^	1
PHRM 104	Calculations for Pharmacy Technician^^	3
PHRM 106	Role of the Pharmacy Technician^^	3
PHRM 109	Pharmacology^^	3
PHRM 110	Federal Law and Ethics in Pharmacy Practice^^	2

^^*Courses to complete with a grade of C or higher*

Certificate Total	15 Hours

Skills Certificate in Structural Welding

The Skills Certificate in Structural Welding is designed for the student who wants to get into the workforce as soon as possible. The welding courses follow American Welding Society (AWS) guidelines, and the successful student will be eligible for up to six AWS welder qualifications, according to the AWS D 1.1 Structural Welding Code. In the classroom, students will learn the technological information associated with the welding processes and how to apply that information to practical use on the job. This program meets the needs of both beginning and experienced welders who are seeking certification.

Welders need good eyesight, hand-eye coordination and manual dexterity. Students should be able to concentrate on detailed work for long periods and must be able to lift up to 45 pounds, bend, stoop, crawl, kneel, climb ladders, and work in awkward and cramped positions.

All students should be aware welding fumes produce a chemical known to the state of California to cause cancer and birth defects (or other reproductive harm). Students should review the Material Data Safety Sheets (MSDS) available in the welding department located in the Fielding Technical Center, Room 270, to be aware of the hazards of welding fumes.

Program Requirements — 18 Hours

WELD 114	Structural Layout and Fabrication^^	3
WELD 116	Print Reading for Welders^^	3
WELD 120	Shielded Metal Arc Welding I^^	3
WELD 122	Shielded Metal Arc Welding II - Structural^^	3
WELD 126	Gas Metal/Flux Core Arc Welding I^^	3
WELD 128	Gas Metal/Flux Core Arc Welding II - Structural^^	3

^^*Courses to complete with a grade of C or higher*

Certificate Total — 18 Hours

ACCOUNTING (ACCT)

ACCT 101 Principles of Financial Accounting
Credit Hours: 3
Prerequisites: ENGL 070 or ENGL 110 and MATH 061 with grades of C or higher or equivalent placement scores. Introductory course covering fundamental accounting principles and financial statement preparation. Emphasis on analysis of effects of business transactions on the earnings, financial position, and cash flows of business entities.

ACCT 102 Managerial Accounting
Credit Hours: 3
Prerequisite: ACCT 101 with a grade of C or higher. Introduction to accounting methods and processes of managerial and cost accounting. Emphasis on developing and using accounting information related to a manufacturing environment, including management control and decision-making**.**

ACCT 109 Applied Accounting Procedures
Credit Hours: 3
Prerequisite: ENGL 070 with a grade of C or higher or equivalent placement scores. Provides a basic understanding of accounting terminology and procedures used to record, classify, and summarize financial data for a sole proprietorship. Designed for those with no previous knowledge of accounting.

ACCT 135 Business and Federal Taxation
Credit Hours: 3
Prerequisite: None. This course is an introduction to the federal and state laws that affect business startups, employment practices, payment of wages and salaries, sales tax compliance, workers' compensation, and business income and corporate income tax. Emphasis is placed on compliance with federal and state reporting requirements. Computerized methods are used to perform required calculations and prepare state and federal reports and returns, as well as manual preparation and processing.

AGRICULTURE (AGRI)

AGRI 106 Global Agriculture
Credit Hours: 3
Prerequisite: None. Course introduces the student to economic, political, cultural, and environmental issues that affect food production and distribution in the advancement of societies in developed and developing countries.

AGRI 107 Foundations of Agriculture
Credit Hours: 3
Prerequisite: None. This course provides an overview of agriculture as an integrated system of food, fiber, and natural resource production. Students examine major sectors of the agricultural industry, including crop production, animal agriculture, agribusiness, technology, sustainability, and environmental stewardship. Emphasis is placed on agriculture's economic and social importance in Missouri and beyond, career pathways within the industry, and the role of communication in agricultural systems. Through discussion, applied activities, and case studies, students develop foundational knowledge of modern agriculture and its relationship to society, natural resources, and global food systems. This course requires 50 hours of volunteer service and attendance at SFCC and Community events.

AGRI 108 Animal Science
Credit Hours: 3
Prerequisite: None. Presents principles of animal agriculture essential for a basic understanding of the animals that are chief producers of food and fiber for human consumption. Specific breeds, animal behavior, anatomy, physiology, reproduction, and nutrition will be included.

AGRI 112 Livestock Evaluation and Management
Credit Hours: 3
Prerequisite: None. A study of livestock selection and meat evaluation used for marketing in the beef, swine, and sheep industries.

AGRI 113 Introduction to Fish and Wildlife Management
Credit Hours: 3
Prerequisite: None. This course provides an overview of the scientific principles and practices used in the conservation and management of fish and wildlife populations and their habitats. Students examine ecological relationships, population dynamics, habitat requirements, and human impacts on natural resources. The course introduces state and federal agencies, regulatory frameworks, and contemporary conservation issues. Emphasis is placed on applied management strategies, field observation, and the role of science-based decision-making in sustaining biodiversity and natural resource systems.

AGRI 116 Animal Nutrition
Credit Hours: 3
Prerequisite: MATH 061 or equivalent placement score. Study includes the nutritional needs of livestock and the formulation of feeds, including hormones, antibiotics, minerals, vitamins, and other feed additives.

AGRI 118 Introduction to Crop Science
Credit Hours: 3
Prerequisite: None. Study includes plant and seed development and selection, cultural practices in the production of common farm crops, and seed and plant identification.

AGRI 119 Soils I with Lab
Credit Hours: 4
Prerequisite: None. An introduction to soil sciences focusing on soil formation, composition, uses, conservation, health, and improvement. Lab provides real-world applications of classroom soil theories and concepts. (3 lecture:1 lab)

AGRI 121 Soils II
Credit Hours: 3
Prerequisite: AGRI 119. An in-depth study of the essential nutrients required by plants for growth and agricultural production, and their relationship to soil factors. Course focuses on plant nutrient requirements and the impact of CEC, pH, base saturation, and other environmental conditions on the availability of those nutrients.

AGRI 125 Natural Resources
Credit Hours: 3
Prerequisite: None. A study of natural resources as they relate to our existence and their relationship to agriculture and each other.

AGRI 126 Ornamental Woody Plants
Credit Hours: 3
Prerequisite: None. Identification and evaluation of trees and shrubs for landscape use.

AGRI 127 Farm Chemicals
Credit Hours: 3
Prerequisite: None. A study of the production, distribution, handling, and application of farm chemicals such as insecticides, rodenticides, fungicides, and herbicides.

AGRI 128 Ornamental Herbaceous Plants
Credit Hours: 3
Prerequisite: None. Identification and evaluation of annuals, biennials, perennials, ground covers, and bulbs.

AGRI 129 General Horticulture
Credit Hours: 3
Prerequisite: None. A study of horticultural crops and the horticulture industry focusing on plant propagation, plant care, growing techniques, and plant sales.

AGRI 131 Introduction to Agribusiness Systems
Credit Hours: 3
Prerequisite: None. Introduction to the agribusiness system career pathway. Topics include an overview of the agribusiness industry, economic principles in agribusiness, and retail agribusiness sales.

AGRI 132 Agriculture Economics
Credit Hours: 3
MOTR Equivalent: MOTR ECON 102A
Introduction to Microeconomics (Agricultural Economics)
Prerequisite: None. A study focusing on the factors affecting the income and expenditures of agricultural businesses and the methods and systems of buying and selling products.

AGRI 134 Marketing Farm Commodities
Credit Hours: 3
Prerequisite: None. A study of theory and practices in marketing agricultural commodities. Course focuses on the use of forward contracts, futures contracts, and options on futures and their use in mitigating price risk in agricultural markets.

AGRI 138 Ag Business Management
Credit Hours: 3
Prerequisite: None. Study includes management functions and economics of agricultural organizations and operations, including input-output analysis, efficient allocations of resources, enterprise combinations, and budget analysis.

AGRI 143 Animal Breeding and Reproductive Management
Credit Hours: 3
Prerequisite: None. A study of basic reproductive anatomy and physiology of farm animal species, followed by reproduction management options and contemporary reproductive technologies.

AGRI 151 Turf and Landscape Management
Credit Hours: 3
Prerequisite: None. A comprehensive study of landscaping. Study incorporates computer-aided drafting (CAD) software to design functional and aesthetically pleasing landscapes and landscape maintenance programs.

AGRI 154 Greenhouse Management with Lab
Credit Hours: 3
Prerequisite: None. Course presents greenhouse design, environmental control, production equipment, and management practices. Instruction includes principles and practices related to plant nutrition, pest control, product handling, and marketing greenhouse production.
(1 lecture:2 lab)

AGRI 168 Commercial Applicator Licensing
Credit Hours: 2
Prerequisite: None. Preparation for and completion of exams necessary to obtain a Missouri Commercial Applicator's License.

AGRI 174 Crop and Insect Scouting
Credit Hours: 2
Prerequisite: None. A study in weed identification, insect and disease infestations, crop damage symptoms, economic threshold levels, and recommended control alternatives.

AGRI 175 Occupational Internship
Credit Hours: 3
Prerequisite: Program Coordinator Approval. Internship is supervised by agricultural staff and designed to assist the student in developing good work habits. Includes training in specific areas unique to the employer and provides a basis for career decisions for the student.

AGRI 180 Problems in Agriculture
Credit Hours: 1 to 3
Prerequisite: Program Coordinator Approval. Independent study of a special problem in agriculture under the supervision of an agriculture instructor.

AGRI 203 Introduction to Precision Agriculture
Credit Hours: 3
Prerequisite: Program Coordinator Approval. This course introduces the key components and technologies of precision agriculture, equipping students with the foundational knowledge needed to optimize agricultural practices. Topics covered include Global Positioning Systems (GPS), Geographic Information Systems (GIS), remote sensing, yield monitoring, and variable rate application (VRA). (2 lecture:1 lab)

AGRICULTURE MECHANICS (AGME)

AGME 101 Agriculture Equipment Operation
Credit Hours: 2
Prerequisites: MECH 101, MECH 102, MECH 103, MECH 104, MECH 105. This course equips students with the essential skills and knowledge required to operate agricultural equipment and implements with confidence. Emphasis is placed on understanding the critical importance of equipment settings, maintenance, and precision technology in optimizing performance and safety.

AGME 103 Introduction to Precision Agriculture
Credit Hours: 3
Prerequisites: MECH 101, MECH 102, MECH 103, MECH 104, MECH 105. This course provides an introduction to the key components and technologies of precision agriculture, equipping students with the foundational knowledge needed to optimize agricultural practices. Topics covered include Global Positioning Systems (GPS), Geographic Information Systems (GIS), remote sensing, yield monitoring, and variable rate application (VRA).

AGME 104 Hydraulic Systems and Diagnostics
Credit Hours: 4
Prerequisites: MECH 101, MECH 102, AGME 101, AGME 103. This course provides an in-depth study of hydraulic theory, maintenance, repair, and troubleshooting methods for mobile hydraulic systems. Key components of the course include: Fundamental Hydraulic Concepts, variations of basic hydraulic systems, including schematics and advanced testing and adjustment techniques, electro-hydraulic circuit operation, testing, and complex valving systems, applying schematics and advanced troubleshooting techniques to real-world scenarios, interpreting fluid hydraulic schematic diagrams, diagnosing and testing electronic and computer-controlled systems, and performing teardown and repair of hydraulic systems. Upon completion of this course, students will be equipped with the advanced skills necessary to effectively manage and troubleshoot mobile hydraulic systems in various applications.

AGME 175 Agriculture Mechanics Internship
Credit Hours: 4
Prerequisites: Program Coordinator Approval. This course offers students the opportunity to apply the knowledge and skills acquired in the classroom to real-world scenarios. Students are responsible for securing their own positions—typically paid—subject to approval by the Field Experience Instructor. Key components of the course include Supervised Professional Experience: The practical experience is conducted under the guidance of a faculty member, who assists students in developing a tailored work experience plan and conducts site visits to monitor progress. Reporting Requirements: Students are required to submit periodic reports detailing their experiences and learning outcomes throughout the course. Performance Evaluation: At the end of the semester, both the faculty member and the work site supervisor will evaluate the student's work performance to assess their professional development. Evaluation Meeting: An evaluation meeting is scheduled during the final exam week to discuss the student's performance and experiences. Clock Hour Requirement: Completion of 360 total clock hours of work

experience is necessary to earn the 2 credit hours for this course. By the conclusion of this course, students will have gained invaluable hands-on experience, enhancing their readiness for professional roles in their chosen field.

AGME 202 Agricultural Transmissions and Drives
Credit Hours: 4
Prerequisites: MECH 101, MECH 102, AGME 103. This course provides a comprehensive overview of troubleshooting and diagnosing power shift transmissions. Key components include analysis of power shift transmission systems, focusing on effective troubleshooting, techniques for testing transmissions, transmission oil pumps, calibration processes for transmission controllers, and powertrain diagnostic procedures. By the end of the course, students will possess the technical expertise to diagnose and troubleshoot power shift transmission systems, preparing them for advanced roles in the automotive and heavy equipment industries.

AGME 203 Precision Agriculture Systems and Diagnostics
Credit Hours: 4
Prerequisites: MECH 101, MECH 102, AGME 103. This course provides students with the skills needed to install, diagnose, troubleshoot, and repair precision agriculture systems and equipment. Emphasis is placed on the mechanical and electronic components that support GPS guidance, variable rate technology, sensors, controllers, and communication networks. Students will gain hands-on experience identifying system faults, performing repairs, and calibrating equipment to ensure accurate operation in the field. The course prepares students to maintain and service the advanced machinery essential to modern agricultural operations.

AGME 204 Agricultural Engine Performance and Mechanical
Credit Hours: 4
Prerequisites: MECH 101, MECH 102, MECH 103, MECH 104, MECH 105, AGME 205. This course provides students with comprehensive experience in the repair and maintenance of diesel engines, specifically tailored for agricultural applications. Through a combination of theoretical knowledge and hands-on experience, students will: diagnose performance complaints, develop skills to effectively identify and analyze performance issues using systematic troubleshooting techniques, and conduct root cause analysis. Students will engage in practical exercises that reinforce their learning, preparing them for real-world challenges in agricultural engine performance and maintenance. By the end of the course, participants will possess the skills necessary to enhance engine efficiency and reliability in agricultural settings.

AGME 205 Ag Fuel and Emissions Systems
Credit Hours: 4
Prerequisites: MECH 101, MECH 102, MECH 103, MECH 104, MECH 105. This course focuses on the service, troubleshooting, and repair of fuel and emissions systems in agricultural equipment. Key topics include the study of injection pumps, turbochargers, and Exhaust Gas Recirculation (EGR) systems, operational principles, exploration of the principles governing computer-controlled diesel engines, with a strong emphasis on diagnosis and troubleshooting, and understanding the interaction with electronic engine software to enhance diagnostic capabilities. Upon completion of this course, students will be equipped with the technical skills and knowledge necessary to proficiently service and repair fuel systems in both agricultural and heavy-duty applications.

ART (ART)

ART 101 Art Appreciation
Credit Hours: 3
MOTR Equivalent: MOTR ARTS 100 Art Appreciation
Prerequisite: None. Study of art history from the late 19th century through the present. Consists of formal lectures, films, slides, gallery and studio visits, assigned readings, as well as hands-on experiences with art materials. Includes the evolution of art by focusing on the major art movements of the past 100 years. Encourages appreciation of visual art through the study of content, design, technique, and criticism of art. Students learn how art changed during this period and how it reflects the dynamics of 20th-century civilization.

ART 103 Design I
Credit Hours: 3
Prerequisite: None. Entry-level art course required of all art majors. Foundation course introducing the study of visual elements and principles of design. Emphasis is placed on the student's ability to recognize and manipulate these elements and principles.

ART 104 Design II
Credit Hours: 3
Prerequisite: ART 103. The second of a two-course sequence required for all art majors. Compositional principles of art are explored through a variety of two- and three-dimensional materials. Emphasis is placed on the student solving specific problems creatively with color.

ART 106 Watercolor I
Credit Hours: 3
Prerequisite: None. An entry-level course for both art majors and anyone interested in beginning watercolor. This foundation course introduces materials and techniques of aqua media painting, various preparations of paper, and the use of brushes and other tools. Control of transparent colors will be learned through experimentation. Students will be encouraged to experiment with a variety of subject matters and techniques in search of personal identity.

ART 107 Watercolor II
Credit Hours: 3
Prerequisite: ART 106. Continuation of the search for a personal expressive identity in watercolor. The students will work from sources they have a personal relationship with, such as people they know, or familiar places and things. In addition to observable sources, the students will be encouraged to respond to the materials used in a creative manner, discovering that the process of painting itself suggests images and ideas. Students will advance their personal expressive identity through making decisions and finding solutions while exploring representation, abstraction, and non-objective painting.

ART 108 Watercolor III
Credit Hours: 3
Prerequisite: ART 107. Includes advanced problems and techniques of aqua media painting.

ART 110 Printmaking
Credit Hours: 3
Prerequisite: None. Course includes exploring and developing personal artistic identity in traditional and contemporary printing methods. Wood block, etching, and monoprint methods will be explored.

ART 112 Drawing I
Credit Hours: 3
MOTR Equivalent: MOTR PERF 105D Studio Art - Drawing
Prerequisite: None. Entry-level art course required for all art majors. Foundation course emphasizing drawing as an expressive medium. Content is based on a series of perceptual and conceptual assignments designed to force students to reach inside themselves to define, through their work, a sense of artistic self.

ART 113 Drawing II
Credit Hours: 3
Prerequisite: ART 112. The second of a two-course sequence required for all art majors. Foundation course emphasizing drawing as an expressive medium. Students search for expressions of their own personal artistic identity through a series of process-oriented assignments using various colored media.

ART 114 Figure Drawing I
Credit Hours: 3
Prerequisite: None. The human figure is analyzed in terms of structure, proportion, and form. Emphasis is placed on representative as well as conceptual approaches.

ART 115 Figure Drawing II
Credit Hours: 3
Prerequisite: ART 114. Continuation of the study of refining the student's technical skills in drawing. Emphasis is placed on technical skills rendering the figure, as well as conceptual approaches and development.

ART 116 Painting I
Credit Hours: 3
MOTR Equivalent: MOTR PERF 105P Studio Art – Painting
Prerequisite: None. Entry-level art course for both art majors and anyone interested in beginning painting. Foundation course that concentrates on painting as an expressive medium and is designed to allow students to explore a variety of subject matter and experiment with painting techniques in a search for personal artistic identity.

ART 117 Painting II
Credit Hours: 3
Prerequisite: ART 116. Continuation of the search for a personal expressive identity. Students will work from sources they have a personal relationship with, such as people they know, or familiar places and things. In addition to observable sources, students will be encouraged to respond to the materials used in a creative manner, discovering that the process of painting itself suggests images and ideas. Students will advance their personal expressive identity through making decisions and finding solutions while exploring representation, abstraction, and non-objective painting.

ART 118 Painting III
Credit Hours: 3
Prerequisite: ART 117 and Instructor Approval. Students may concentrate in watercolor, oil, acrylics, or mixed media.

ART 120 Modern Art History
Credit Hours: 3
Prerequisite: None. Emphasis is placed on the creative nature of man and how creativity enriches society, and the social, economic, and political conditions that influenced and constructed modern art. Study begins with the

development of impressionism and moves through the major art movements of the late 19th and 20th centuries.

ART 122 Sculpture I
Credit Hours: 3
MOTR Equivalent: MOTR PERF 105S Studio Art - Sculpture, Humanities and Fine Arts
Prerequisite: None. Develops insight into the principles of sculptural organization and stresses individual development of three-dimensional forms.

ART 123 Sculpture II
Credit Hours: 3
Prerequisite: ART 122. Continuation of ART 122 with the student developing a body of work that is interrelated. Includes exploration of a variety of materials, including metal, wood, and found objects, with an emphasis placed on individual exploration and development.

ART 126 Ceramics I
Credit Hours: 3
MOTR Equivalent: MOTR PERF 105C Studio Art – Ceramics
Prerequisite: None. Introduces clay construction techniques, basic ways of glazing, and firing systems. Emphasis is placed on students acquiring technical proficiency in a variety of constructive methods and glazing techniques.

ART 127 Ceramics II
Credit Hours: 3
Prerequisite: ART 126. Continuation of ART 126 with students becoming more proficient in construction techniques that are appropriate for their ideas. Emphasis is placed on students developing a body of work that is interrelated.

ART 130 Fiber Arts I
Credit Hours: 3
Prerequisite: None. Explores a variety of traditional and nontraditional mediums and techniques in the fiber arts. Emphasis is placed upon process and investigation.

ART 131 Fiber Arts II
Credit Hours: 3
Prerequisite: ART 130. Continuation of the study and exploration of traditional and nontraditional mediums and techniques in the fiber arts. Emphasis is placed upon process and further investigation of personal expression as well as development of craftsmanship through the fiber media.

ART 140 Art History Survey I
Credit Hours: 3
MOTR Equivalent: MOTR ARTS 101 - Art History I
Prerequisite: None. Introductory survey of Western architecture, sculpture, painting, decorative arts, and visual culture from prehistory to Medieval Europe. This course focuses on the social, cultural, historical, and religious contexts of the art produced during this time frame.

ART 142 Art History Survey II
Credit Hours: 3
MOTR Equivalent: MOTR ARTS 102 - Art History II
Prerequisite: None. Introductory survey of Western architecture, sculpture, painting, decorative arts, and visual culture from the Renaissance to today. This course focuses on the social, cultural, historical, and religious contexts of the art produced during this time frame.

ART 160 Introduction to Graphic Design
Credit Hours: 3
MOTR Equivalent: MOTR PERF 105GA Studio Art – Graphic Arts
Prerequisite: None. This is an introductory course in graphic arts and visual communication. This course familiarizes students with traditional printmaking techniques as well as digital imaging and production. This is a hands-on course that engages students in basic two-dimensional design processes and techniques through serigraphy, engraving, typography, and computer illustration/imaging.

ART 162 Digital Photography
Credit Hours: 3
Prerequisite: None. This is an introductory course in basic photographic techniques and processes. Students will learn the foundations of digital imaging editing as well as core photographic concepts such as lighting, exposure, composition, and presentation.

ART 165 Web Authoring and Graphic Tools
Credit Hours: 3
Prerequisite: ART 160 or ART 162 with a grade of C or higher. This is a hands-on course centered on teaching students the foundations of web design. Students will learn to create professional and dynamic websites that visually engage today's growing digital community. Students will complete this course with a uniquely individualized digital portfolio that illustrates their own professional discipline to potential employers.

ART 180 Problems in Art
Credit Hours: 3
Prerequisite: Instructor Approval. Must complete courses I and II of the desired subject area. Independent study of a special problem in art under the supervision of an art instructor. Students will concentrate on a particular medium, subject, or source. May be repeated in a different problem area.

AUTISM (ATSM)

ATSM 105 Autism Spectrum Disorders
Credit Hours: 3
Prerequisite: None. Examination of the neurological and behavioral characteristics of children with autism spectrum disorders (ASD). Course includes an overview of characteristics and learning traits, classification systems, assessment strategies, issues, approaches, and interventions related to individuals with ASD. Special emphasis will be given to selecting evidence-based practices and enhancing collaboration among individuals with ASD, their families, and supporting professionals.

ATSM 110 Communication and Social Competence
Credit Hours: 3
Prerequisite: None. Overview of language development and communication strategies, issues, pragmatics, communication systems, augmentative and alternative communication systems (AAC), social deficits in autism, and approaches for teaching social skills. Includes an emphasis on the development of appropriate communication skills.

AUTOMOTIVE (AUTO)

AUTO 106 Power Train Management
Credit Hours: 4
Prerequisites: AUTO 104 and AUTO 116 with grades of C or higher. Corequisites: AUTO 104 and AUTO 116. Automotive systems are studied in depth, beginning with fundamental principles and quickly advancing to more sophisticated theories and applications. Classroom studies in fuel and emissions systems, computerized engine controls, various input and output devices, ignition, intake, and exhaust systems, with a lab, will enhance the learning experience with hands-on demonstrations and tasks. (0.5 Lecture: 3.5 Lab)

AUTO 113 Steering, Suspension and Wheels
Credit Hours: 4
Prerequisite: AUTO 104 with a grade of C or higher. Corequisite: AUTO 104. Study develops skills and knowledge required to diagnose and repair steering and suspension systems, including tire and wheel service, wheel balance, four-wheel alignment, springs and torsion bar suspension, power steering pump, steering gears, rack and pinion steering, and TPMS systems. (0.5 Lecture: 3.5 Lab)

AUTO 115 Automotive Brakes|
Credit Hours: 4
Prerequisite: AUTO 104 with a grade of C or higher. Corequisite: AUTO 104. Theory of operation, diagnostics and troubleshooting, repairing and servicing of brakes will be taught, as well as modern anti-lock brakes and traction control systems. The diagnosis and repair of both drum and disc systems will be explored, including the fabrication of brake lines as a student project. Offered Spring only. (0.5 Lecture: 3.5 Lab)

AUTO 118 Automotive Electrical Systems
Credit Hours: 4
Prerequisites: AUTO 104 and AUTO 116 with grades of C or higher. Course provides an in-depth focus and discussion on the understanding and application of automotive electrical, electronic, and computer systems as related to modern vehicle systems. Offered Fall and Spring. (0.5 Lecture: 3.5 Lab)

AUTO 175 Automotive Internship
Credit Hours: 3
Prerequisite: Program Coordinator Approval. Application of work skills in a supervised work environment. Companies that sponsor internships provide supervision. The college provides general guidance and works with the sponsoring company in developing an outline of the work experiences unique to the site. Course is designed to provide the student with an opportunity to demonstrate work skills, work ethics, and the ability to work with others. It is the student's responsibility to identify a company and establish the internship. Instructors may assist as needed.

AUTO 180 Automotive Special Projects
Credit Hours: 1 to 6
Prerequisite: None. Students will be involved in automotive lab operations, including preventive maintenance and repair on equipment, tool inventory and management, ordering parts and supplies, assisting in lab setup, recording customer repair orders, inputting data, and conducting industry-specific research. There will be opportunities to work on unique automotive projects as well.

AUTO 210 Drive Train Diagnosis & Repair
Credit Hours: 4
Prerequisite: MECH 101 with a grade of C or higher. This course focuses on developing the skills and knowledge required to diagnose, service, and repair a full range of driveline and transmission systems. This course covers clutches, manual and automatic transmissions, transaxles,

torque converters, drive shafts, differentials, axles, wheels and bearings, and four-wheel drive hub assemblies. Emphasis is placed on system design and operation, component inspection and testing, and both in-vehicle and out-of-vehicle repair procedures. (0.5 Lecture: 3.5 Lab)

AUTO 225 Advanced Powertrain Systems
Credit Hours: 4
Prerequisite: MECH 101, MECH 102, AUTO 106, and AUTO 118 with grades of C or higher. Focus on advanced diagnosis, service, and repair of modern automotive powertrain systems. The course integrates electronic engine management, fuel and air control systems, ignition systems, emissions controls, sensors and actuators, and scan tool data interpretation with hands-on minor engine disassembly, inspection, repair, and reassembly. Students will apply advanced diagnostic strategies using digital multimeters, scan tools, feedback systems, and manufacturer service information. Emphasis is placed on systematic troubleshooting, root-cause analysis, and accurate repair procedures on live vehicles. (0.5 Lecture: 3.5 Lab)

BEHAVIORAL HEALTH SUPPORT (BHS)

BHS 200 Introduction to Behavioral Health Support
Credit Hours: 3
Prerequisite: None. This course introduces students to the behavioral health care profession and the programs and services offered by Community Behavioral Health Centers. Emphasis will be placed on the skills and ethical considerations needed to work with a diverse client population. Topics will include the most prevalent mental health diagnoses, the recovery/resiliency model, family systems, as well as additional philosophies used in the behavioral health support professional role. In addition, students will discuss relevant ethical and legal principles.

BHS 210 Law and Ethics
Credit Hours: 3
Prerequisite: Acceptance to the Behavioral Health Support program. This course examines the legal and ethical issues related to services for clients provided by behavioral health professionals and the ethical standards of the field. Topics include laws and policies for guardianship, custody, conservatorship, client rights, abuse, fraud, detention, etc.

BHS 220 Systems of Care
Credit Hours: 3
Prerequisite: Acceptance to the Behavioral Health Support program. This course provides a holistic approach to care that promotes active participation by the client to share in decision-making and self-advocacy. Students practice motivational interviewing and skill-based methods for recovery/resiliency. Students will develop wellness plans and learn to identify support networks.

BHS 230 Substance Abuse Intervention
Credit Hours: 3
Prerequisite: Acceptance to the Behavioral Health Support program. This course will provide a study of chemical use and dependency, including the cycle of addiction and recovery. Students will study comprehensive substance use treatment and rehabilitation models.

BHS 240 Client Encounters I
Credit Hours: 3
Prerequisite: Acceptance to the Behavioral Health Support program. This course introduces the techniques for assuring consistency, accountability, and effectiveness for intake operations. Topics include goals for intake interviews and assessment, along with the various tools utilized in assessing, determining risk, and identifying treatment needs. Students will practice skill development by conducting interviews, learn how to build client rapport, and how to elicit required information. In addition, students will utilize proper clinical tools for treatment plan development.

BHS 250 Chronic Health Support
Credit Hours: 3
Prerequisite: Acceptance to the Behavioral Health Support program. This course presents the pathophysiology and treatment of chronic diseases, including diabetes, hypertension, COPD, and other common diseases. Unique patient groups in relation to specific disability, disease, and/or restrictive issues are identified, as well as typical medication and treatment protocols.

BHS 260 Family and Youth Strategies
Credit Hours: 3
Prerequisite: Acceptance to the Behavioral Health Support program. This course will examine family roles and dynamics and explore dysfunction within the family unit. Students will discuss strategies and interventions for working with family and youth, along with preventative practices. During the course, students will have the opportunity to explore the different roles of behavioral support professionals in the community.

BHS 270 Client Encounters II
Credit Hours: 3
Prerequisite: Acceptance to the Behavioral Health Support program. This course will teach students skills for effective collaboration with other professionals, conflict resolution, and crisis intervention and de-escalation techniques. Students will practice active listening and effective communication skills and develop the skills needed to

adjust to working within various client populations. Students will consider complicated client situations and problem resolutions.

BHS 280 Evidence Based Treatment
Credit Hours: 3
Prerequisite: Acceptance to the Behavioral Health Support program. Students will be introduced to treatment modalities including cognitive behavioral therapy, parent management training, and parent-child interaction therapy, along with other evidence-based practices. They will practice skills used in effective case management.

BHS 290 Field Practicum I
Credit Hours: 4
Prerequisite: Acceptance to the Behavioral Health Support program. This course is a field placement designed to provide students with observation and practical experience in a behavioral health community center or similar service agency or provider. Students will spend a minimum of 160 hours throughout the course in an agency placement. The course will compare and contrast how various populations are served and how agencies collaborate and integrate services to meet client needs. Students will have the opportunity to practice completing intake, assessments, and treatment planning. Passing a background check and drug test is required for this course.

BHS 295 Field Practicum II
Credit Hours: 4
Prerequisite: Acceptance to the Behavioral Health Support program. This course provides students with practical experience in Community Behavioral Health Centers and other community service agencies. Students will spend a minimum of 160 hours throughout the course in an agency placement. During that time, students will gain experience working with diverse client populations facing a variety of behavioral issues. Students will conduct functional behavioral intervention plans and make informed decisions when working with clients having behavioral health issues. They will gain an understanding of how agencies coordinate and integrate treatment and how a comprehensive individualized treatment plan is developed.

BIOLOGY (BIO)

BIO 100 Essentials of Biology
Credit Hours: 3
MOTR Equivalent: MOTR BIOL 100 - Essentials in Biology
Prerequisite: None. Introduction of biology that develops understanding of basic, unifying concepts in science and biology. Topics include the scientific method, biochemistry, cell biology, metabolism, genetics, evolution, ecology, and human ecology.

BIO 103 Human Biology
Credit Hours: 3
MOTR Equivalent: MOTR LIFS 100 - Essentials in Human Biology
Prerequisite: None. Introduction to the structure and function of human body systems and human influence on the biosphere. Topics include biochemistry, body organization, homeostasis, structural maintenance of cells, tissues, and organ systems of the human body, evolution, ecology, and human influence on the biosphere.

BIO 105 Introduction to Ecology
Credit Hours: 3
MOTR Equivalent: MOTR BIOL 100EC - Essentials in Biology (Ecology and Conservation)
Prerequisite: None. Introductory course to the study of ecology. Focus on the scientific method, ecological concepts including populations, communities, ecosystems, natural selection, predator-prey relationships, nutrient cycling, and human impact on the natural world.

BIO 112 Principles of Biology with Lab
Credit Hours: 4
MOTR Equivalent: MOTR BIOL 100L - Essential Biology with Lab
Prerequisite: None. Introduction of biology that develops an understanding of basic, unifying concepts in science and biology through an investigative laboratory environment. Topics include the scientific method, biochemistry, cell biology, metabolism, genetics, evolution, ecology, and human ecology. (3 lecture:1 lab)

BIO 113 Cellular Biology
Credit Hours: 4
MOTR Equivalent: MOTR BIOL 150LCB - Biology with Lab (Cell Biology)
Prerequisite: None. This introductory biology course examines the structure and function of animal and plant cells, interactions between cells, intra- and intercellular signaling mechanisms, and basic cellular biochemistry. Within the above context, students are also introduced to basic concepts of molecular biology and development. (3 lecture:1 lab)

BIO 125 General Biology with Lab
Credit Hours: 4
MOTR Equivalent: MOTR BIOL 150L - Biology with Lab
Prerequisites: None. An introduction to biological sciences intended for biology and related STEM majors. Topics include philosophical, historical, and social context of biology; scientific method and investigative techniques; biological structure and function at molecular and cellular levels; plant and animal form, function, and diversity; and related conservation issues. (3 lecture:1 lab)

BIO 130 Topics in Biology
Credit Hours: 1 to 3
Prerequisite: None. Study of a major topic in biology and science. Content and topics change and may include ecology, bio-history, evolution, science in science fiction, or history of science. Specific subjects will be announced prior to course offerings.

BIO 207 Human Anatomy with Lab
Credit Hours: 4
MOTR Equivalent: MOTR LIFS 100LA - Essentials in Human Biology with Lab (Anatomy)
Prerequisites: Two-semester high school biology course with a grade of C or higher, or P, earned each semester, or a college biology course with a grade of C or higher (BIO 103 or BIO 113 is recommended but not required). Study of gross and microscopic anatomy of the human organs, tissues, and systems. (2 lecture:2 lab)

BIO 208 Human Physiology with Lab
Credit Hours: 4
MOTR Equivalent: MOTR LIFS 150LP - Human Biology with Lab (Physiology) (majors)
Prerequisite: BIO 113, BIO 207, or CHEM 101 with a grade of C or higher,or Biology Department approval. Course presents the basic biological functions of the human body from cell to tissue, tissue to organ, and organ to organ system, with attention to the interrelationships at these levels. (3 lecture:1 lab)

BIO 210 Principles of Genetics with Lab
Credit Hours: 4
Prerequisites: BIO 112 or BIO 125 with a grade of C or higher. A comprehensive introduction to fundamental principles of inheritance intended for biology and related majors. Topics include heredity concepts from classical and modern genetics; the physical, biochemical, chromosomal, and cytological basis of inheritance patterns; selection and breeding; and evolution. (3 lecture:1 lab)

BIO 221 Microbiology
Credit Hours: 4
Prerequisite: BIO 113, BIO 207, or CHEM 101 with a grade of C or higher. Course presents basic principles of infection, immunity and the study of microorganisms; studying life at the microscopic level (including eukaryotic cells, protozoa, fungi, prokaryotic cells, bacteria, mycoplasma, rickettsia, viruses, prions, and infectious agents). Lecture and laboratory sessions consider techniques in conventional culture methods, examination and identification of microorganisms. Topics include microbiological history, environmental constraints, taxonomy, nutritional requirements, biochemical activity, genetic makeup, pathogenicity, virulence, immunology, public health, and medical significance of microbiology. (3 lecture:1 lab)

BIO 280 Problems in Biology
Credit Hours: 1 to 4
Prerequisite: Instructor Approval. Independent course presenting the study of a special problem in biology under the supervision of a science instructor.

BUSINESS ADMINISTRATION (BADM)

BADM 101 Introduction to Business
Credit Hours: 3
Prerequisite: ENGL 060 with a grade of C or higher or equivalent placement scores. Course is an introduction to the principles, practices, and problems encountered in the general business environment. Topics include options for organizing a business and the basic functions of accounting, marketing, management, and finance.

BADM 103 Legal Environment of Business
Credit Hours: 3
Prerequisite: ENGL 070 or ENGL 110 with a grade of C or higher or equivalent placement scores. Investigation of various legal issues encountered in the business environment. Emphasis is placed on developing an understanding of the court system. Includes specific legal topics such as contracts, torts, employment law, product liability, and consumer protection.

BADM 107 Personal Finance
Credit Hours: 3
Prerequisites: ENGL 070 and MATH 061 with grades of C or higher or equivalent placement scores. Introduction to personal financial management. Examines the techniques necessary to analyze and make choices concerning major purchases, tax planning, insurance, borrowing, investing, and other personal finance issues.

BUSINESS MANAGEMENT (BSMT)

BSMT 106 Principles of Marketing
Credit Hours: 3
Prerequisite: Equivalent reading placement score into ENGL 070. Introduction to the key concepts and issues underlying the modern practice of marketing that impact today's managers. The marketing process is analyzed through the four main decision areas of products and services, distribution, promotion, and pricing.

BSMT 108 Principles of Management
Credit Hours: 3
Prerequisite: Equivalent reading placement score into ENGL 070. Introduction to the role of management and supervision. Examines the concepts and the practical application of fundamental supervisory skills such as planning, problem solving, motivation, staffing, leadership, training, managing conflict, and providing effective performance reviews.

BSMT 110 Salesmanship
Credit Hours: 3
Prerequisite: Equivalent reading placement score into ENGL 070. Introduction to the study of selling as a major function of the marketing mix. Topics include developing customer relationships, social selling, presentation strategies, solutions development, and negotiating skills. Each student will conduct recorded and live role-play presentations and an automated role-play simulation.

BSMT 119 Customer Service Management
Credit Hours: 3
Prerequisite: None. Introduction to the customer service function of business. Students will acquire and apply communication skills needed to be successful in today's competitive, customer-oriented work environment. Topics include communication, leadership, relationship building, customer retention, problem solving, and measurement of satisfaction.

BSMT 122 Digital Marketing Essentials
Credit Hours: 3
Prerequisite: Equivalent reading placement score into ENGL 070. Introduction to the theoretical understanding of the Internet marketplace necessary to adapt to its changes. Topics include web design and analytics, search engine optimization, paid search marketing, display advertising, email marketing, social media marketing, and online reputation management. Each student will work one on one with a business owner in the community to review and suggest improvements to the business' digital marketing strategy.

BSMT 125 Human Relations
Credit Hours: 3
Prerequisite: Equivalent reading placement score into ENGL 070. Introduction to the concept of business organizations as a social system. Topics consist of motivation, perception, communication, behavior theories, and group dynamics. Utilizes activities in the classroom to demonstrate major human relations concepts.

BSMT 130 Business Strategies
Credit Hours: 3
Prerequisite: Consent of program coordinator. Capstone course that provides business management students with an understanding of the total enterprise system. Students will draw upon prior coursework to solve business problems.

BSMT 175 Business Management Internship
Credit Hours: 3
Prerequisite: Consent of program coordinator. On-the-job experience tailored to enforce topics taught within the degree. Student supervision will be the cooperative arrangement between the program coordinator and employer. Progress reports and a final report documenting work experience will be submitted.

BSMT 185 Project Management
Credit Hours: 3
Prerequisite: Equivalent reading placement score into ENGL 070. Course will help students understand why organizations have developed a formal project management process to gain a competitive advantage. It covers concepts and skills that are used by managers to propose, plan, secure resources, budget, and lead project teams to successful completion of their projects. The text is structured to meet the needs of those wishing to prepare for the PMP or CAPM certification exams. Same as CIS 185.

BSMT 211 Data Analytics
Credit Hours: 3
Prerequisite: CAPP 125. This is an introductory course designed to provide students with the knowledge and skills needed to harness the power of data for informed decision-making. This course will cover essential concepts, techniques, and common analytics software.

COMPUTER APPLICATIONS (CAPP)

CAPP 125 Microcomputer Applications
Credit Hours: 3
Prerequisite: None. Keyboarding proficiency is recommended. Learn the operations of personal computers through the use of Microsoft Office Professional software. Applications include fundamentals of word processing, spreadsheets, database management, and presentations.

CAPP 162 Desktop Publishing
Credit Hours: 3
Prerequisite: None. Introduction to the basics of electronic page layout using professional publishing software. Valuable skills will be gained in image scanning, manipulation, and merging text and graphics.

COMMERCIAL DRIVER'S LICENSE (CDL)

CDL 201 Ag Transport and CDL Licensing
Credit Hours: 3
Prerequisite: Must be 18+ years old. This course prepares students for the operation of commercial motor vehicles commonly used in agriculture. Emphasis is placed on vehicle safety, transport regulations, CDL requirements, and the hands-on skills necessary to pass the written and driving portion of the Commercial Driver's License (CDL) exam. Students will explore Department of Transportation (DOT) rules, farm vehicle exemptions, and best practices for transporting grain, chemicals, livestock, and equipment. The course also covers hours-of-service rules, load securement, and hazard communication standards (HAZMAT overview).

CHEMISTRY (CHEM)

CHEM 101 Introduction to Chemistry with Lab
Credit Hours: 4
MOTR Equivalent: MOTR CHEM 100L - Essentials in Chemistry with Lab
Prerequisite: None. One semester course for non-science majors designed to acquaint the student with scientific reasoning. A course that introduces the principles of the nature of matter/atom, reactions, reaction pathways, solutions including pH, measurements, instrumentation, nuclear chemistry, organic/biological molecules, and their applications to current issues. (3 lecture, 1 lab)

CHEM 123 General Chemistry I with Lab
Credit Hours: 5
MOTR Equivalent: MOTR CHEM 150L – Chemistry I with Lab
Prerequisites: MATH 114 with a grade of C or higher or equivalent placement scores. Intended for the science major and science-oriented fields, course examines the structure of the atom, periodic classification, molecular structures, chemical reactions, aqueous solutions, and chemical energetics. (3 lecture, 2 lab)

CHEM 124 General Chemistry II with Lab
Credit Hours: 5
Prerequisite: CHEM 123 with a grade of C or higher. Continuation of CHEM 123 emphasizing chemical energetics, entropy, equilibria, reduction oxidation systems, and reaction pathways in organic/biochemistry. (3 lecture, 2 lab)

CHEM 180 Problems in Chemistry
Credit Hours: 1 to 3
Prerequisite: Consent of instructor. Independent study and/or lab investigation of a special problem in chemistry. Instruction varies between 1 to 3 lecture hours and 1 to 3 lab hours.

CHEM 221 Organic Chemistry I with Lab
Credit Hours: 5
Prerequisite: CHEM 123 with a grade of C or higher. The first of a two-semester sequence in organic chemistry, course studies the structure, bonding and nomenclature of organic compounds (alkanes, alkenes, alkynes, and conjugated systems); substitution and elimination reaction mechanisms; and identification of organic compounds via UV, VIS, IR, GC, and NMR spectroscopy. (3 lecture, 2 lab)

CHEM 222 Organic Chemistry II with Lab
Credit Hours: 5
Prerequisite: CHEM 221 with a grade of C or higher. Continuation of CHEM 221, including the study of the reactions associated with aromatic compounds, carbonyl compounds, and polyfunctional natural products. (3 lecture, 2 lab)

CHEM 265 Elementary Organic and Biochemistry with Lab
Credit Hours: 5
Prerequisite: Any CHEM course with a grade of C or higher. Introduction to organic chemistry and the fundamental concepts of biochemistry; topics include functional groups, nomenclature, reactivity, organic reaction mechanisms. Course explores molecules associated with life functions, emphasizing physiological, nutritional, and comparative aspects. Required for some non-chemistry degrees; generally does not transfer for chemistry majors. (3 lecture, 2 lab)

COMPUTER INFORMATION SYSTEMS (CIS)

CIS 103 Introduction To Computer Sciences
Credit Hours: 3
Prerequisite: None. In this course, students explore the CIS field, covering operating systems, data management, networking, and software development. The focus is on

foundational knowledge for CIS careers, including the role of computing in modern society.Prerequisite: CIS 148 with a grade of C or higher. Course prepares students for programming in the DB2 environment. DB2 is a relational database. A substantial portion of the course will use SQL statements for maintaining a database.

CIS 155 Programming in C#
Credit Hours: 3
Prerequisite: None. Programming language C# is introduced as an application programming language. Top-down program development methodologies are discussed. Instruction includes learning the different C# language features to develop application programs.

CIS 157 Advanced C# with AI
Credit Hours: 3
Prerequisite: CIS 155 with a grade of C or higher. Course presents advanced C# programming techniques. Instruction includes data manipulation, file handling, logic processing, database access, and maintenance through SQL commands.

CIS 158 JAVA
Credit Hours: 3
Prerequisite: None. Introduction to object-oriented programming with a major emphasis in developing GUI-based applications for business settings, web pages, and smart devices.

CIS 161 Systems Analysis
Credit Hours: 3
Prerequisite: CIS 124 with a grade of C or higher. Content includes the analysis and identification of multi-user computer system development. Documentation of systems requirements is stressed.

CIS 168 Game Programming
Credit Hours: 3
Prerequisite: CIS 155. The course structure is designed to offer a comprehensive overview of crucial aspects in video game development, both in 2D/3D. By the end of this course, students will understand fundamental tools and techniques necessary for video game creation. No previous knowledge of HTML, Web design, or programming is assumed. Students are required to purchase a mass storage device such as a thumb or jump drive.

CIS 170 Cloud and AI Fundamentals
Credit Hours: 3
Prerequisite: None. This course introduces foundational artificial intelligence concepts with a focus on cloud-based AI services and real-world applications. Students will explore key AI workloads, including machine learning, computer vision, natural language processing, and generative AI. The course emphasizes how AI solutions are developed and used in modern environments. Students will gain hands-on experience using AI services for tasks such as data analysis and content generation, while also examining ethical considerations, data use, and system limitations.

CIS 174 Programming in C# with SQL
Credit Hours: 3
Prerequisite: CIS 155 with a grade of C or higher. Course provides an in-depth study of SQL commands, structures, and programming through the software Visual Studio software. Application development will focus on the process of designing, building, and maintaining projects and databases for the business environment. The end product will increase the efficiency and productivity of a business organization.

CIS 175 CIS Internship
Credit Hours: 3
Prerequisite: Program Coordinator Approval. Includes a minimum of 120 clock hours of supervised work experience that allows the student to apply CIS operation and programming theory. Recommended to be taken during the last year of study.

CIS 179 Programming Project
Credit Hours: 4
Prerequisite: Consent of instructor. Must be taken during the last semester of study before completion of the CIS degree. Includes individually designed assignments that require students to develop and test a program and document program results.

CIS 180 Problems in CIS
Credit Hours: 1 to 3
Prerequisite: Consent of program coordinator. Independent study of a special problem in computer systems arranged under the supervision of a CIS instructor.

CIS 185 Project Management
Credit Hours: 3
Prerequisite: Equivalent reading placement score into ENGL 070. Course will help students understand why organizations have developed a formal project management process to gain a competitive advantage. It covers concepts and skills that are used by managers to propose, plan, secure resources, budget, and lead project teams to successful completion of their projects. The text is structured to meet the needs of those wishing to prepare for the PMP or CAPM certification exams. Same as BSMT 185.

CIS 220 Advanced Python
Credit Hours: 3
Prerequisite: CIS 120 with a grade of C or higher. This course covers advanced Python programming techniques, such as enhancing problem-solving skills with complex algorithms and data structures. Students will explore topics including classes and inheritance, and recursion techniques. Additionally, the course covers GUI programming to create user-friendly applications. Emphasis is also placed on testing, debugging, and version control. Hands-on projects will provide practical experience with these advanced concepts.

CIS 268 3D Game Development
Credit Hours: 3
Prerequisites: CIS 155 with a grade of C or higher. This course offers a comprehensive overview of crucial aspects in 3D video game development. Students will learn fundamental tools and techniques necessary for 3D video game creation, including advanced programming concepts, asset integration, physics simulations, and animation. Students will create 3D video games and develop an understanding of the complexities involved in the game development process.

CRIMINAL JUSTICE (CJ)

CJ 101 Introduction to Law Enforcement
Credit Hours: 3
Prerequisite: None. Examines the history of policing in the United States and an overview of the relationship between law enforcement and the American society. Includes an examination of the duties of law enforcement officers, the operations of police agencies, police-community relations, the police subculture, and the need for police objectives to conform to constitutional procedures.

CJ 102 Introduction to Criminal Justice
Credit Hours: 3
MOTR Equivalent: MOTR CRJS 101 – Introduction to Criminal Justice
Prerequisite: None. This course will provide students with: (1) an understanding of the history and development of the American criminal justice system with emphasis on the components of the police, courts, and corrections as well as their interrelationships; and (2) an examination of the history of criminal justice around the world as well as a brief comparison of modern system.

CJ 103 Traffic Safety and Investigation
Credit Hours: 3
Prerequisite: None. Introduces traffic control and accident investigation in modern cities; reviews principles of organizing and administering police units for traffic enforcement, accident prevention, and safety education; and presents basic techniques of accident investigation, analysis, and interpretation.

CJ 105 Criminal Law
Credit Hours: 3
Prerequisite: None. Examination of criminal, common, and statutory law with its application to the criminal justice system. Emphasis will be placed on the classification of crime and criminal behavior, including the necessary elements and mental states of criminal acts. Course will also examine criminal acts based on Missouri criminal statutes.

CJ 107 Criminology
Credit Hours: 3
MOTR Equivalent: MOTR CRIM 205 – Introduction to Criminology
Prerequisite: None. Examines the various theories of criminal behavior and crime causation as well as the problems of treatment, corrections, and control of crime. Course also looks at patterns of crime, research methods, and the response to criminal behavior.

CJ 109 Juvenile Delinquency
Credit Hours: 3
Prerequisite: None. Examines the origins, philosophy and objectives of the juvenile justice system in America including the concept of juvenile delinquency and its causes, juvenile case dispositions and juvenile detention procedures. Close attention will be placed on the organization, function and jurisdiction of juvenile justice agencies and the application of the Missouri Juvenile Code.

CJ 111 Introduction to Corrections
Credit Hours: 3
Prerequisite: None. Examines the history, development and present components of both institutional and community-based corrections in America.

CJ 115 Procedural Law
Credit Hours: 3
Prerequisite: None. Examines the U.S. Constitution, court cases, statutes, and other sources of regulation in the field of criminal procedure. These regulatory documents will be examined and considered as to how they apply to criminal law and the administration of justice. Specific issues to be covered include search and seizure, interrogations and

confessions, grand jury investigations, identification procedures, and the right to counsel.

CJ 118 Criminal Justice Communications
Credit Hours: 3
Prerequisite: None. Provides direction and guidance for students seeking entry-level careers in law enforcement and corrections, with additional examination of written and verbal communications. Provides instruction concerning the reporting of factual information in an accurate and proper format. In addition to reinforcing basic writing tools, course will stress the components of typical police writing formats. Topics such as interviewing and interrogation techniques and courtroom testimony will also be covered.

CJ 120 Probation and Parole
Credit Hours: 3
Prerequisite: None. Examination of community based corrections and rehabilitation through probation and parole supervision and its impact of offenders in the criminal justice system.

CJ 124 Drugs, Society and Criminal Justice
Credit Hours: 3
Prerequisite: None. Designed to provide an overview of the relationship between drugs and crime as well as the response of the criminal justice system to illegal drug use. Course includes: current U.S. drug abuse trends and patterns; review of the history of drug abuse and legal attempts to control such abuse; exploration of the physiological, psychological and sociological effects of common abused drugs; and a discussion of the connections between drug abuse and crime.

CJ 131 Criminal Investigation I
Credit Hours: 3
Prerequisite: None. Course includes theory, methods, and procedures of criminal investigation with focus on historical origins, the investigator, organization and management of the investigative function and various investigative methods including crime scene investigation, techniques of interviewing, collection of evidence, suspect development and case preparation. Will focus on specific areas such as death/injury investigations, sex related offenses, crimes against children, human trafficking, and robbery.

CJ 132 Criminal Investigation II
Credit Hours: 3
Prerequisite: None. Course includes theory, methods, and procedures of criminal investigation with focus the investigator, organization and management of a crime scene in areas such as burglary, theft, vehicle thefts, cybercrime, arson, drug crimes, and terrorism. Course will cover the trial process and officer testimony/preparation.

CJ 175 Supervised Occupational Experience in Criminal Justice
Credit Hours: 3
Prerequisites: CJ 102 and Consent of Program Coordinator. Provides students with the opportunity to observe and experience the operation of a selected agency within the criminal justice system. Program will require the student to spend a minimum of 120 hours with the agency during the semester, as well as the completion of other requirements. Students will be required to correspond with the instructor.

CJ 180 Problems in Criminal Justice
Credit Hours: 1 to 3
Prerequisites: CJ 102 and consent of program coordinator. Independent study of a special problem in criminal justice under the direct supervision of a criminal justice instructor.

CONSTRUCTION TECHNOLOGY (CNST)

CNST 105 Construction Materials and Methods
Credit Hours: 3
Prerequisite: None. Introductory course that provides an overview of the materials and methods used in light framing and building finish systems from floor to roof and from exterior cladding to interior finishes. Includes wood light framing, light-gauge metal framing, roofing, glass and glazing, cladding systems, windows and doors, interior finishes, ceilings, and floors. This course will focus on the development of a fundamental knowledge base through case study and detailed product analysis. (0.5 Lecture: 2.5 Lab)

CNST 106 Construction Estimation
Credit Hours: 3
Prerequisite: None. Examines the methods used in cost estimating in the construction industry. Skills such as quantity take-off, measurement, quote and bid solicitation, etc., are developed, as well as discussion of strategy involved in bid formulation and submissions. Computerized estimating techniques are explored, as well as manual methods. Course will require completion of a cost estimate for residential, commercial, industrial, or heavy construction projects.

CNST 113 Construction Management
Credit Hours: 3
Prerequisite: None. Discusses careers in construction as well as the general business operations involved in the construction industry. Basic overview of the legal structure

of businesses, contract terms, and the roles of stakeholders in a construction project.

CNST 138 Construction Planning and Scheduling
Credit Hours: 3
Prerequisite: None. Discusses methods of organizing work items associated with a construction project into a logical sequence of optimizing efficiency and profitability. Manual and computerized scheduling methods are used in developing project schedules for both real and simulated projects.

CNST 142 Building Mechanical Systems
Credit Hours: 3
Prerequisite: None. Introduction to the understanding of components and design of major building mechanical systems. Topics include electrical, plumbing and HVAC systems in buildings. Design calculations for proper sizing of system components are discussed, as well as the various methods and materials used in the construction of such systems.

CNST 145 Construction Methods I
Credit Hours: 3
Prerequisite: None. Students will study the methods used to install various construction materials related to the major divisions of the Construction Specification Institute (CSI) format during their first year. Credit is awarded through an articulation agreement with approved career and technical centers.

CNST 146 Construction Methods II
Credit Hours: 3
Prerequisite: None. Continuation of CNST 145 for students in their second year. Students will study the methods used to install various construction materials related to the major divisions of the Construction Specification Institute (CSI) format. Credit is awarded through an articulation agreement with approved career and technical centers.

CNST 148 Construction Codes and Law
Credit Hours: 3
Prerequisite: None. Overview of legal requirements related to the design and execution of construction projects. The International Building Code is studied, and upon completion of the course, the student will be capable of navigating it and many other similar reference manuals. Other legal aspects of the construction industry are discussed, including, but not limited to, contract law as well as liability issues.

CNST 150 Building Layout and Surveying
Credit Hours: 3
Prerequisite: MATH 108 or MATH 114 with a grade of C or higher or equivalent placement score. Construction field engineering activities to include surveying, site/building layout, and dimensional control. Interpretation of plot books, site plans, and topographic maps is also included. (2 Lecture:1 Lab)

CNST 160 Statics and Strength of Materials
Credit Hours: 3
Prerequisite: MATH 108 or MATH 114 or equivalent placement score. Introduces the fundamentals of structural analysis and design. Materials and structural systems are discussed in terms of load bearing properties as well as economy of construction. Students will gain a greater understanding of how structures work as well as how choices are made regarding the selection of appropriate materials and systems to meet a given need.

CNST 162 Construction Safety
Credit Hours: 3
Prerequisite: None. Comprehensive discussion of job safety and best practices as they pertain to the construction industry. A general philosophy of safety awareness is achieved through study of specific hazards and case studies. Students will be required to obtain the OSHA 10-hour certification, understand OSHA regulations as well as legal implications on the construction industry.

CNST 175 Construction Management Internship
Credit Hours: 3 to 6
Prerequisite: Program Coordinator Approval. Cooperative work experience within the construction industry setting. Students will work as management-level employees for an established construction-related firm. Periodic site visits and employer interviews by the instructor will ensure that students are performing meaningful management-level functions and are generally meeting the course expectations.

CNST 262 Advanced Construction Safety
Credit Hours: 3
Prerequisites: None. A comprehensive exploration of construction site safety, emphasizing hazard recognition, risk management, and regulatory compliance. Through in-depth discussions, case studies, and real-world applications, students will develop a thorough understanding of workplace safety standards and best practices. This course places a strong focus on OSHA regulations and their legal impact on the construction industry. Students will be required to obtain the OSHA 30-hour certification,

demonstrating proficiency in advanced safety protocols and industry compliance.

COMMUNICATION (COMM)

COMM 100 Introduction to Communication
Credit Hours: 3
MOTR Equivalent: MOTR COMM 100 – Introduction to Communications
Prerequisite: None. Introduces students to the study and practice of communication. This broad-based course addresses application, research, and theory in areas such as interpersonal, intercultural, intrapersonal, mass, mediated, organizational, public address, etc. Students must demonstrate conceptual understanding of the spectrum of content and application in one or more topic areas.

COMM 101 Public Speaking
Credit Hours: 3
MOTR Equivalent: MOTR COMM 110 – Fundamentals of Public Speaking
Prerequisite: None. Study and practice of basic techniques involved in generating, designing, delivering, and evaluating ideas for speech situations facing adults of our society.

COMM 103 Small Group Communication
Credit Hours: 3
MOTR Equivalent: MOTR COMM 125 – Small Group Communication
Prerequisite: None. Presents the communication process as it relates to small group behavior, including the study of principles, methods and forms of discussion used in small groups.

COMM 105 Interpersonal Communication
Credit Hours: 3
MOTR Equivalent: MOTR COMM 120 – Interpersonal Communication
Prerequisite: None. Presents theories, principles and techniques of communication as they apply to one-to-one, small groups, and conference interaction.

COMM 110 Introduction to Media and AI Literacy
Credit Hours: 3
MOTR Equivalent: MOTR SBSC 100 - Introduction to Mass Communications
Prerequisite: ENGL 070 with a grade of C or higher or equivalent placement scores. Presents a basic overview of the scope and role of the mass media, including artificial intelligence (AI), in society. Course helps students become informed media consumers or participants and gain cultural and global perspectives on the communication industry.

COMM 114 News Reporting I
Credit Hours: 3
Prerequisite: ENGL 070 with a grade of C or higher or equivalent placement scores. Includes the examination of news value, rights and responsibilities of the press, newsgathering and reporting techniques, leads, interviewing, style, and specialized articles.

COMM 120 History of Film
Credit Hours: 3
MOTR Equivalent: MOTR FILM 103 – History of Film
Prerequisite: None. This course is an introduction to film history from the beginning of cinema to current films. The technological, cultural, and aesthetic development in motion pictures will be studied. Students will understand, analyze, and explore the human condition through watching and discussing various films throughout history.

COMM 160 Introduction to Digital Video
Credit Hours: 3
Prerequisite: None. Basic theoretical understanding and practical application of digital video production techniques including image composition, lighting, field and studio techniques, nonlinear editing.

COMM 161 Media Productions I
Credit Hours: 3
MOTR Equivalent: MOTR PERF FILM 107 – Introduction to Filmmaking
Prerequisite: None. Practical application of digital video production skills including digital cameras, digital audio, lighting, field production and non-linear editing.

COMM 162 Media Productions II
Credit Hours: 3
Prerequisite: COMM 161 with a grade of C or higher. Practical application of digital video production knowledge and skills including advanced digital camera specifications, advanced understanding of camera lens function/application and advanced field production. Builds upon the foundational skills learned in Media Productions I.

COMM 163 Digital Video Editing
Credit Hours: 3
Prerequisite: None. Practical application of basic digital video editing skills using modern NLE software.

COMM 164 Digital Storytelling
Credit Hours: 3
Prerequisite: COMM 161 with a grade of C or higher. Theoretical understanding and practical implementation of visual and aural storytelling techniques within modern digital video productions.

COMM 165 Graphics for Video
Credit Hours: 3
Prerequisite: None. Practical application of graphical element in video production using current VFX and editing software.

COMM 180 Problems in Communication
Credit Hours: 1 to 3
Prerequisite: Consent of instructor. Independent study of a special problem in communications under the supervision of a communications instructor in the department.

COMM 190 Argumentation and Debate
Credit Hours: 3
MOTR Equivalent: MOTR COMM 220 – Argumentation & Debate
Prerequisite: None. Argumentation and Debate is a course in critical thinking and oral communication. Students will learn how to improve their argumentation skills, so they can engage in debates effectively, productively, and ethically in a variety of situations. More specifically, this class is designed to improve students' abilities to: 1. Recognize and evaluate various forms of arguments, claims, and evidence. 2. Build solid arguments (including the research and planning stages of argument). 3. Engage in productive, ethical argument and debate with others. 4. Engaging in critical thinking, which requires analysis, the use of solid reasoning and evidence, refutation, the avoidance of logical fallacies, and the ability to critique opposing arguments.

COMM 201 Writing Across the Media
Credit Hours: 3
Prerequisite: ENGL 070 with a grade of C or higher or equivalent placement scores. Focuses on composing for print and electronic media, beginning with the skills necessary to write with clarity and attention to user interactivity. Students will produce polished, published nonfiction work native to new media/new journalism formats. The primary media may include blogs, wikis, white papers, press releases or other developing formats. Students will also learn to support composing in these primary media with other kinds of networked communication. Instruction will focus on developing advanced rhetorical skills appropriate for new media compositions.

COMM 215 Introduction to Social Media Management
Credit Hours: 3
Prerequisite: None. Course examines current trends and issues in new media communication while also equipping students with the skills necessary to use various digital applications for internal and external communication strategies and content-delivery. Course examines and identifies various theories and best practices related to a variety of platforms and strategies in view of the creation of digitally/new media-based branding messages.

COMM 220 Digital Media Communications Internship
Credit Hours: 6
Prerequisite: Consent of program coordinator. On-the-job experience tailored to enforce topics taught within the program for minimum of 200 clock hours on the job site. Student supervision will be the cooperative arrangement between the program coordinator and employer. Progress reports and a final portfolio documenting work experience will be submitted. Recommended to be taken during the last semester of study. Requires six group meetings and several individual conferences with the instructor.

CYBER SECURITY (CYB)

CYB 110 Offensive Security
Credit Hours: 3
Prerequisite: NET 101 and NET 106 with grades of C or higher. In this course students will learn techniques regarding governance, risk and compliance concepts, scoping and customer requirements in regards to planning and conducting penetration testing. Performing vulnerability scans along with reconnaissance methods and analyzing the results will be taught along with utilizing those results in order to conduct exploits and attacks. Students will learn how to report on their findings and communicate results back to key stakeholders.

CYB 120 Defensive Security
Credit Hours: 3
Prerequisite: NET 101 and NET 106 with grades of C or higher. This course will teach students methods to prevent, detect, and eliminate cyber security threats through rigorous security monitoring.

CYB 130 Industrial Cyber Security
Credit Hours: 3
Prerequisite: NET 101 and NET 106 with grades of C or higher. Students will address basic security concepts as they apply to critical infrastructure systems. Concepts addressed in the course will include Industrial Control Systems (ICS), such as Supervisory and Data Acquisition (SCADA) systems,

Process Control Systems (PCS), and Distributed Control Systems (DCS), national standards for the protection of critical infrastructure, and risk management concepts and tools for critical infrastructure systems. Students will perform a risk assessment of a specific critical infrastructure sector using an appropriate risk assessment framework and tools, identifying threats and vulnerabilities specific to the sector, and making appropriate recommendations for mitigating risk.

CYB 140 Cloud Security Technologies
Credit Hours: 3
Prerequisite: NET 101 and NET 106 with grades of C or higher. In this course students will implement, manage, and monitor security for resources in various cloud or hybrid environments. They will learn to recommend security components and configurations to protect identity and access, data, applications, and networks. Managing security posture, identifying and remediating vulnerabilities and performing threat modeling will also be covered.

DANCE (DANC)

DANC 110 Tap I
Credit Hours: 2
Prerequisite: None. Introduction to fundamentals of tap dance technique including, but not limited to: locomotor movement, basic tap dance steps and phrases, musicality/rhythm, personal interpretation in performance, and common dance vocabulary/terminology. Students will be presented with a range of movement from various tap dance techniques which will be incorporated in the stages of the class: warm-up and floor work, center and locomotor movement skills, and the development of longer, in-depth movement phrases. Students are expected to be focused, enthusiastic, and willing to take risks.

DANC 120 Jazz I
Credit Hours: 2
Prerequisite: None. Introduction to fundamentals designed to develop basic skills in jazz technique. Each session will include a warm-up period in which students will focus on alignment, strength building, increasing flexibility, and developing fundamentals for building technique; a section dedicated to technical exercises in the center; jazz progressions across the floor; and finish with extended movement combinations and class dance. An emphasis will be placed on developing skills in musicality, dynamic range, and performance quality.

DENTAL HYGIENE (DH)

DH 102 Dental Radiography
Credit Hours: 2
Prerequisite: Acceptance to the Dental Hygiene program. Emphasis is on component parts, functions, operations of the dental x-ray unit, and radiation safety. Analyzing relationships between anatomical and radiographic landmarks are included.

DH 104 Dental Radiography Lab
Credit Hours: 1
Prerequisite: Acceptance to the Dental Hygiene program. Emphasis is on dental radiation safety, dental radiography equipment, imaging techniques, and image placement. Identifying relationships between anatomical and radiographic features are included. (1 lab)

DH 106 Dental Clinical Emergencies
Credit Hours: 1
Prerequisite: Acceptance to the Dental Hygiene program. Course presents procedures to manage common medical and dental emergencies, emergency protocol, and medications used in the dental office. Adult/ child/ infant CPR, choking, and child/ adult AED are included. Upon successful completion of this course, the student will receive certification from the American Heart Association for Health Care Provider CPR/ AED.

DH 108 Oral Anatomy and Histology
Credit Hours: 3
Prerequisite: Acceptance to the Dental Hygiene program. Course presents distinguishing characteristics of typical and atypical dentition, head and neck anatomy, and the relationship with tooth development, eruption, and clinical implications. (2 lecture, 1 lab)

DH 111 Pharmacology
Credit Hours: 3
Prerequisite: Acceptance to the Dental Hygiene program. Course presents basic terminology and principles of drug interactions, routes of administration, adverse reactions, and drugs that alter dental treatment. Emphasis is on knowledge of drugs related to the development of a dental hygiene care plan.

DH 113 Dental Hygiene Ethics and Legal Issues
Credit Hours: 1
Prerequisite: Acceptance to the Dental Hygiene program. Course provides the student with knowledge of professional development, ethics, and jurisprudence as related to clinical practice. Topics presented include conflict management,

state dental laws and legal liabilities, professional conduct, dental hygiene political involvement, and professional organizational roles for dental hygiene professionals. The Missouri State Jurisprudence test is included in this course.

DH 115 Community Dental Health I
Credit Hours: 1
Prerequisite: Acceptance to the Dental Hygiene program. Course presents an introduction to community dental health problems, epidemiology, research and writing skills, and biostatistics. Emphasis on initial development of a community dental health program is included. (1.5 lecture, 0.5 lab)

DH 117 Community Dental Health II
Credit Hours: 0.5
Prerequisite: Acceptance to the Dental Hygiene program. Course presents emphasis on the steps to developing community dental health promotion programs, governmental departments of public health services, and school-based dental health programs. The role of a dental hygienist is applied in evidence-based decision-making strategies in the dental public health setting. (0.5 lab)

DH 118 Principles of Periodontics
Credit Hours: 2
Prerequisite: Acceptance to the Dental Hygiene program. Course presents an introduction to the supporting structures of the teeth, pathogenesis, histopathology, and therapeutic treatment of periodontal disease. Recognition, prevention, treatment, and maintenance of periodontal disease and health is examined as these concepts relate to the role of the dental hygienist.

DH 120 Dental Biomaterials with Lab
Credit Hours: 2
Prerequisite: Acceptance to the Dental Hygiene program. Course will introduce the purpose, chemistry, procedure techniques, dental safety, and patient education of biomaterials. Procedures include personal mouth protection devices, placing a rubber dam, placing sealants, study models, polishing a restoration, impressions, periodontal dressing, and removing sutures. (1 lecture, 1 lab)

DH 122 General and Oral Pathology
Credit Hours: 3
Prerequisite: Acceptance to the Dental Hygiene program. Course introduces general terminology and disorders of human systems with focus on pathological conditions of the oral cavity and surrounding structures. Principles of oral-systemic relationships, manifestations of systemic diseases, infectious diseases, and concepts of immunity are included.

DH 124 Applied Nutrition and Oral Health Education
Credit Hours: 2
Prerequisite: Acceptance to the Dental Hygiene program. Course presents the biological uses of nutrients and provides a biochemical foundation for the metabolism of dietary components. Preparation of the dental hygiene student to fulfill his or her role in oral health education as it relates to patient care habits, motivation, and dietary effects on the oral cavity is included.

DH 128 Local Anesthesia
Credit Hours: 2
Prerequisite: Acceptance to the Dental Hygiene program. Course prepares dental hygiene students for the safe, effective administration of local anesthesia. Included are content areas in anatomy, physiology, pharmacology, and emergency management. Laboratory sessions provide actual experiences in administration of local anesthetics. (1 lecture, 1 lab)

DH 131 Introduction to Dental Hygiene Theory
Credit Hours: 2
Prerequisite: Acceptance to the Dental Hygiene program. Course acquaints students with the professional, educational, and therapeutic services of a dental hygienist and provides the background, and knowledge necessary to function in dental hygiene.

DH 133 Dental Hygiene Theory I
Credit Hours: 2
Prerequisite: Acceptance to the Dental Hygiene program. Course introduces the process of scientific literature review with evidence-based decision-making, including concepts of instrumentation, sharpening, and patient education.

DH 134 Dental Hygiene Theory II
Credit Hours: 1
Prerequisite: Acceptance to the Dental Hygiene program. Course introduces adjunctive clinical techniques, including principles of air powder polishing, sensitivity management, locally applied antimicrobials, alternative fulcrums, and silver diamine fluoride.

DH 135 Dental Hygiene Theory III
Credit Hours: 2
Prerequisite: Acceptance to the Dental Hygiene program. Course focuses on the management of patients with special needs including physical, mental, social, and/or emotional. Additional content relates to patients with medically compromised conditions affecting care.

DH 136 Dental Hygiene Theory IV
Credit Hours: 2
Prerequisite: Acceptance to the Dental Hygiene Program. Course involves scientific literature review, test taking strategies, case-based analysis, and dental hygiene review for enhanced recall of material in preparation for the National Dental Hygiene Board Examination (NDHBE).

DH 139 Dental Hygiene Clinic I
Credit Hours: 4
Prerequisite: Acceptance to the Dental Hygiene Program. Course emphasizes infection control, periodontal assessing, planning treatment, patient education, and implementing comprehensive dental hygiene care on patients in a clinical setting.

DH 140 Dental Hygiene Pre-Clinic I
Credit Hours: 4
Prerequisite: Acceptance to the Dental Hygiene program. Course introduces the basic skills to function in dental hygiene clinical practice. Basic principles of patient education, patient assessment and treatment planning, hand and ultrasonic instrumentation with infection control, and polishing and fluorides using typodonts and student partners.

DH 143 Dental Hygiene Clinic II
Credit Hours: 3
Prerequisite: Acceptance to the Dental Hygiene program. Course continues skill development in dental hygiene care. Procedures include assessment, analysis of risk factors, sequencing care strategies, implementing comprehensive dental hygiene care, and developing follow-up recommendations for patients in a clinical setting.

DH 144 Dental Hygiene Clinic III
Credit Hours: 6
Prerequisite: Acceptance to the Dental Hygiene Program. Course continues skill development in dental hygiene care management. Students continue clinical skill development by identifying advanced periodontal cases, planning course of treatment, implementing comprehensive dental hygiene care, identifying and managing patient referral needs. Clinical emphasis is on the treatment of advanced periodontal cases.

DH 145 Dental Hygiene Clinic IV
Credit Hours: 6
Prerequisite: Acceptance to the Dental Hygiene Program. Course is for advanced dental hygiene student skills. Students continue skill development by assessing, treatment planning, implementing comprehensive dental hygiene care, managing patient referral needs, and identifying licensure requirements for dental hygiene clinical practice.

DIAGNOSTIC MEDICAL SONOGRAPHY (DMS)

DMS 102 Patient Care and Health Care Communication
Credit Hours: 2
Prerequisite: Acceptance to the Diagnostic Medical Sonography program. Entry-level patient care, professionalism and critical thinking skills utilized in the daily responsibilities of an imaging professional are presented in preparation for student clinical rotations. Best practice verbal and nonverbal communication skills within the health care setting are introduced. Students will learn ergonomic ultrasound imaging and patient transfer techniques. Standard precautions and infection control measures are taught.

DMS 103 Cardiac Ultrasound I
Credit Hours: 3
Prerequisite: Acceptance to the Diagnostic Medical Sonography program or consent of program director. Introduction to cardiac ultrasound fundamentals including principles of imaging, scan modes, cardiac anatomy and physiology, embryology, evaluation methods and hemodynamics. Discusses diagnostic adult cardiac ultrasound including normal appearance, scanning techniques, patient care, and an introduction to pathology.

DMS 107 Ultrasound Scanning Lab I
Credit Hours: 4
Prerequisite: Acceptance to the Diagnostic Medical Sonography program. Instructional lab consisting of instructor-guided hands-on scanning sessions in the Diagnostic Medical Sonography lab. Students will learn and perform ultrasound scanning protocols and image optimization techniques. Practical basic preparation for student's first clinical education experience.

DMS 108 Seminar in Sonography
Credit Hours: 2
Prerequisite: Acceptance to the Diagnostic Medical Sonography program. This writing intensive research-based course facilitates a comprehensive overview of sonography as part of the larger health care apparatus. Ethical, social, cultural, legal, and billing issues in health care are discussed.

DMS 113 Cardiac Ultrasound II
Credit Hours: 3
Prerequisite: DMS 103 with a grade of B or higher or consent of program director. Continuation of DMS 103. Cardiac ultrasound fundamentals including principles of imaging, scan modes, cardiac anatomy and physiology, embryology, evaluation methods, and hemodynamics. Discusses diagnostic adult cardiac ultrasound including normal appearance, scanning techniques, patient care, and pathology.

DMS 120 Sonography Principles and Instrumentation I
Credit Hours: 3
Prerequisite: Acceptance to the Diagnostic Medical Sonography program or consent of program director. Comprehensive instruction on acoustic physics, Doppler ultrasound principles, hemodynamics, and ultrasound instrumentation. Bioeffects, safety and the interactions between ultrasound and tissues will be presented. Quality assurance, quality improvement and sonography department protocols will also be covered.

DMS 122 Sonography Principles and Instrumentation II
Credit Hours: 3
Prerequisite: DMS 120 with a grade of C or higher or consent of program director. Continuation of DMS 120. Comprehensive instruction on acoustic physics, Doppler ultrasound principles, hemodynamics, and ultrasound instrumentation. Bioeffects, safety and the interactions between ultrasound and tissues will be presented. Quality assurance, quality improvement and sonography department protocols will also be covered. This course will include Sonography Principles and Instrumentation (SPI) registry review material and mock exams.

DMS 123 Cardiac Ultrasound III
Credit Hours: 3
Prerequisite: DMS 113 with a grade of B or higher or consent of program director. Continuation of DMS 113. Cardiac ultrasound fundamentals including principles of imaging, scan modes, cardiac anatomy and physiology, embryology, evaluation methods, and hemodynamics. Discusses diagnostic adult cardiac ultrasound including normal appearance, scanning techniques, patient care, and pathology.

DMS 127 Ultrasound Lab II
Credit Hours: 4
Prerequisite: DMS 107 with a grade of B or higher or consent of program director. Continuation of DMS 107. Instructional lab consisting of instructor-guided hands-on scanning sessions in the Diagnostic Medical Sonography lab. Students will learn and perform ultrasound scanning protocols and image optimization techniques. Practical basic preparation for student's first clinical education experience. In addition to lab contact hours the student may be assigned to complete 2 to 16 hours in a clinical setting. (4 lab)

DMS 130 General Sonography I
Credit Hours: 2
Prerequisite: Acceptance to the Diagnostic Medical Sonography program or consent of program director. Course includes a brief review of the anatomy, physiology and sectional anatomy of the human abdomen, superficial structures, and non-cardiac chest. Pathology and pathophysiology specific to the general concentration will be presented. Recognition of the normal and abnormal sonographic appearances of the human thoracic, abdominal and superficial anatomy will be taught. Best practice examination methods utilizing ultrasound technology are presented. Basic exam protocols will be discussed.

DMS 132 General Sonography II
Credit Hours: 2
Prerequisite: DMS 130 with a grade of B or higher or consent of program director. Continuation of DMS 130. Course includes a brief review of the anatomy, physiology and sectional anatomy of the human abdomen, superficial structures and non-cardiac chest. Pathology and pathophysiology specific to the general concentration will be presented. Recognition of the normal and abnormal sonographic appearances of the human thoracic, abdominal and superficial anatomy will be taught. Best practice examination methods utilizing ultrasound technology are presented. Basic exam protocols will be discussed.

DMS 133 Cardiac Ultrasound IV
Credit Hours: 3
Prerequisite: DMS 123 with a grade of B or higher or consent of program director. Continuation of DMS 123. Cardiac ultrasound fundamentals including principles of imaging, scan modes, cardiac anatomy and physiology, embryology, evaluation methods, and hemodynamics. Discusses diagnostic adult cardiac ultrasound including normal appearance, scanning techniques, patient care, and pathology. This course includes cardiac registry review material and mock registry exams.

DMS 134 General Sonography III
Credit Hours: 2
Prerequisite: DMS 132 with a grade of B or higher or consent of program director. Continuation of DMS 130 and DMS 132. Course includes a brief review of the anatomy, physiology and sectional anatomy of the human abdomen, superficial structures and noncardiac chest. Pathology and

pathophysiology specific to the general concentration will be presented. Recognition of the normal and abnormal sonographic appearances of the human thoracic, abdominal and superficial anatomy will be taught. Best practice examination methods utilizing ultrasound technology are presented. Basic exam protocols will be discussed. This course will include Abdominal Sonography registry review material and mock exams.

DMS 140 OB/GYN Sonography I
Credit Hours: 2
Prerequisite: Acceptance to the Diagnostic Medial Sonography program or consent of program director. Course includes a brief review of the anatomy, physiology and sectional anatomy of the human gravid and nongravid pelvis. Pathology and pathophysiology specific to the obstetrics and gynecology concentration will be presented. Recognition of the normal and abnormal sonographic appearances of the female human gravid and nongravid pelvis will be taught. Best practice examination methods utilizing ultrasound technology are presented. Basic exam protocols will be discussed. Human embryology as appropriate will be presented.

DMS 142 OB/GYN Sonography II
Credit Hours: 2
Prerequisite: DMS 140 with a grade of B or higher or consent of program director. Continuation of DMS 140. Course includes a brief review of the anatomy, physiology and sectional anatomy of the human gravid and nongravid pelvis. Pathology and pathophysiology specific to the obstetrics and gynecology concentration will be presented. Recognition of the normal and abnormal sonographic appearances of the female human gravid and nongravid pelvis will be taught. Best practice examination methods utilizing ultrasound technology are presented. Basic exam protocols will be discussed.

DMS 144 OB/GYN Sonography III
Credit Hours: 2
Prerequisite: DMS 142 with a grade of B or higher or consent of program director. Continuation of DMS 140 and DMS 142. Course includes a brief review of the anatomy, physiology and sectional anatomy of the human gravid and nongravid pelvis. Pathology and pathophysiology specific to the obstetrics and gynecology concentration will be presented. Recognition of the normal and abnormal sonographic appearances of the female human gravid and nongravid pelvis will be taught. Best practice examination methods utilizing ultrasound technology are presented. Basic exam protocols will be discussed. Human embryology as appropriate will be presented. This course will include OB/GYN registry review material and mock exams.

DMS 145 Sonography Clinical I
Credit Hours: 4
Prerequisite: DMS 127 with a grade of B or higher or consent of program director. Beginning internship of the Diagnostic Medical Sonography profession. Students will be assigned to a clinical site(s) and will actively participate in the daily activities and patient examinations of an ultrasound department under the direct supervision of a registered sonographer. Students will begin obtaining scan competencies in this course. They must properly document hours spent in the clinical site and log all observed and performed exams. Students must complete assigned clinical hours and scanning competencies as outlined in the DMS Student Handbook.

DMS 150 Vascular Sonography I
Credit Hours: 2
Prerequisite: Acceptance to the Diagnostic Medical Sonography program or consent of program director. Course includes a brief review of the anatomy, physiology and sectional anatomy of the human venous and arterial systems. Pathology and pathophysiology specific to the vascular concentration will be presented. Recognition of the normal and abnormal sonographic appearances of human vascular anatomy will be taught. Best practice direct and indirect examination methods utilizing ultrasound technology are presented. Basic exam protocols will be discussed.

DMS 152 Vascular Sonography II
Credit Hours: 2
Prerequisite: DMS 150 with a grade of B or higher or consent of program director. Continuation of DMS 150. Course includes a brief review of the anatomy, physiology and sectional anatomy of the human venous and arterial systems. Pathology and pathophysiology specific to the vascular concentration will be presented. Recognition of the normal and abnormal sonographic appearances of human vascular anatomy will be taught. Best practice direct and indirect examination methods utilizing ultrasound technology are presented. Basic exam protocols will be discussed.

DMS 154 Vascular Sonography III
Credit Hours: 2
Prerequisite: DMS 152 with a grade of B or higher or consent of program director. Continuation of DMS 150 and DMS 152. Course includes a brief review of the anatomy, physiology and sectional anatomy of the human venous and arterial systems. Pathology and pathophysiology specific to the vascular concentration will be presented. Recognition of the normal and abnormal sonographic appearances of

human vascular anatomy will be taught. Best practice direct and indirect examination methods utilizing ultrasound technology are presented. Basic exam protocols will be discussed. This course will include Vascular Sonography registry review material and mock exams.

DMS 155 Sonography Clinical II
Credit Hours: 7
Prerequisite: DMS 145 with a grade of B or higher or consent of program director. Internship of the Diagnostic Medical Sonography profession. Students will be assigned to a clinical site(s) and will actively participate in the daily activities and patient examinations of an ultrasound department under the supervision of a registered sonographer. Students will obtain scan competencies in this course. They must properly document hours spent in the clinical site and log all observed and performed exams. Students must complete assigned clinical hours and scanning competencies as outlined in the DMS Student Handbook.

DMS 165 Sonography Clinical III
Credit Hours: 7
Prerequisite: DMS 155 with a grade of B or higher or consent of program director. Final internship of the Diagnostic Medical Sonography profession. Students will be assigned to a clinical site(s) and will actively participate in the daily activities and patient examinations of an ultrasound department under the supervision of a registered sonographer. Students will obtain scan competencies in this course. They must properly document hours spent in the clinical site and log all observed and performed exams. Students must complete assigned clinical hours and scanning competencies as outlined in the DMS Student Handbook.

EARTH SCIENCE (EASC)

EASC 106 Introduction to Geology with Lab
Credit Hours: 4
MOTR Equivalent: MOTR GEOL 100L– Geology with Lab
Prerequisite: None. Provides an understanding of the forces that were active in the formation of the Earth, the processes whereby the surface of the Earth is sculptured, the identity of Earth materials, and the location and value of the Earth's resources. Topics include history of geology, plate tectonics, matter and minerals, rocks, volcanoes, weathering and soil, geologic time, earthquakes, plate boundaries, water and energy. Rock and mineral identification is a large part of the lab section of this course. Labs include identification of rocks and minerals, plate tectonics and geologic time.

EASC 118 Environmental Geology
Credit Hours: 3
MOTR Equivalent: MOTR GEOL 100 – Geology
Prerequisite: None. Focuses on natural hazards and the human consequences associated with geologic processes. Topics include the study of plate tectonics, earthquakes, volcanoes, floods, storms, wildfires, pollution, climate change, and global warming. Emphasis is placed on how those hazards affect humans and how human activity affects Earth's environment.

EASC 120 Introduction to Astronomy
Credit Hours: 3
MOTR Equivalent: MOTR ASTR 100 – Astronomy
Prerequisite: None. Introduction to our present knowledge of the universe. Topics include the solar system, stellar astronomy and the structure of the universe.

EARLY CHILDHOOD DEVELOPMENT (ECD)

ECD 101 Introduction to Early Childhood
Credit Hours: 3
Prerequisites: EDUC 108 and the successful completion of an approved background screening. Course is an overview of early childhood programs and curricula, historical and present, and an examination of qualities and skills necessary for working with young children. Observation of young children in various classroom settings will be incorporated into the course.

ECD 103 Child Growth and Development
Credit Hours: 3
Prerequisites: EDUC 108 and the successful completion of an approved background screening. Provides a general understanding of the physical, social, emotional, language, and cognitive development of early childhood, and the importance of the environment and interrelationships on development.

ECD 107 Child Nutrition, Health and Safety
Credit Hours:3
Prerequisites: EDUC 108 and the successful completion of an approved background screening. Presents basic factors that affect child health including basic nutrition, clothing habits, health routines, hygiene, childhood diseases, first aid, and safety. Curriculum includes care facilities factors such as a safe, challenging learning environment and licensing requirements.

ECD 109 Observation and Planning Assessment
Credit Hours: 3
Prerequisites: EDUC 108 and the successful completion of an approved background screening. Course provides the student with opportunity to understand methods of observing children from birth to age 8, how to plan after observation, and make enhancements to curriculum based on assessment.

ECD 111 Language Development Early Literacy
Credit Hours: 3
Prerequisite: None. Presents the basic use of tools and materials that stimulate imagination, reasoning and concept formation in language developments. Students are given an overview of literacy experiences for young children throughout the day, the continuum of reading and writing development from birth and beyond, and specific ways to incorporate literacy into playing, reading, talking, writing, and learning.

ECD 115 Child Social/Emotional Development
Credit Hours: 3
Prerequisite: None. Course is an overview of childhood behavior, interaction and relationships, environments and its effects on social and emotional development. Behavior and guidance concerns of children and problems facing adolescents and adults are addressed.

ECD 117 Creative Expression and Play
Credit Hours: 3
Prerequisites: EDUC 108 and the successful completion of an approved background screening. Presents the development of creative expressions in the young child through activities such as music, art and dance, and their incorporation into the daily curriculum. The value of children's play and discovery as learning opportunities will be emphasized.

ECD 121 Curriculum Strategies for Early Childhood
Credit Hours: 3
Prerequisites: EDUC 108 and the successful completion of an approved background screening. Course is an examination of techniques, learning activities and materials used to teach young children with an emphasis on planning and implementing a developmentally appropriate curriculum utilizing the Constructivist Theory.

ECD 125 Introduction to Special Individuals and Sensory Integration
Credit Hours: 3
Prerequisites: EDUC 108 and the successful completion of an approved background screening. Presents an introduction to characteristics of exceptional individuals and educational history and theories with exceptional individuals, especially children. Study will include effects of disability on adjustment to home, school, community, and on families of young children. Includes an overview of federal and state systems of support for children with special needs.

ECD 127 Parent/Teacher Interaction
Credit Hours: 3
Prerequisite: None. Course presents the principles of child development with family relationships applied to group and individual work with parents. It is intended to help providers in developing skills that will help them effectively relate to parents. Topics will include: communication techniques, children's fears, discipline, nutrition, and school and community resources.

ECD 129 Administration in Early Childhood Care
Credit Hours: 3
Prerequisites: EDUC 108 and the successful completion of an approved background screening and consent of program coordinator. Course presents the operation of a child care facility including staff relations, budgeting, ordering, planning, and evaluating center operations. Early childhood care center ethics, funding opportunities, licensing, curriculum, and parent involvement will are also incorporated into this course.

ECD 131 Child Development Portfolio/Assessment Preparation
Prerequisites: EDUC 108 and successful completion of an approved background screening and ECD 101 and ECD 107 with grades of C or higher and consent of program coordinator. Corequisites: ECD 101 and ECD 107. Course provides a step-by-step approach of the activities necessary to complete the degree requirements. Course is a review of the functional areas along with an emphasis on the general understanding of the physical, social, emotional, language, and cognitive development of early childhood. The competencies required and the assessment processes are considered important components of this course.

ECD 175 Child Care Practicum
Credit Hours: 3
Prerequisites: EDUC 108 and the successful completion of an approved background screening and ECD 101 through ECD 129 with grades of C or higher. Course presents the operation of a child care facility including staff relations, budgeting, ordering, planning, and evaluating center operations. Early childhood care center ethics, funding opportunities, licensing, curriculum, and parent involvement are also incorporated into this course.

ECONOMICS (ECON)

ECON 101 Principles of Macroeconomics
Credit Hours: 3
MOTR Equivalent: MOTR ECON 101 – Introduction to Macroeconomics
Prerequisites: ENGL 070 and MATH 061 with grades of C or higher or equivalent placement scores. Examines the economy as a whole with an emphasis on how scarcity affects a nation. Topics include understanding and measuring economic growth, inflation, unemployment, monetary and fiscal policy, and exchange rates

ECON 102 Principles of Microeconomics
Credit Hours: 3
MOTR Equivalent: MOTR ECON 102 – Introduction to Microeconomics
Prerequisites: ENGL 070 and MATH 061 with grades of C or higher or equivalent placement scores. Examines the price system and resource allocation, markets and efficiency, production costs, wage determination, market structures, and the role of government in regulating and supplementing the pricing system.

ECON 180 Problems in Economics
Credit Hours: 1 to 3
Prerequisite: Consent of instructor. Independent study of a special problem in economics under the supervision of an economics instructor.

ENGINEERING DESIGN TECHNOLOGY (EDT)

EDT 105 Print Reading for Construction
Credit Hours: 3
Prerequisite: None. Course introduces the concepts of sketching, technical drawing, measurement, scale, format, and how they are applied to reading drawings of mechanical, architectural, civil, structural, and electrical fields. The relationship between the intent of the drawings, trade practices, American Society of Mechanical Engineers (ASME) standards, and the ability to extract and utilize information found on various kinds of drawings will be emphasized.

EDT 111 Introduction to Engineering Design
Credit Hours: 3
Prerequisite: None. Students are introduced to the engineering design process and fundamentals of computer-aided design (CAD). Through hands-on learning, students develop skills in parametric modeling, sketching, assemblies, and technical drawings while exploring design intent, problem-solving, and the ability to clearly communicate design concepts.

EDT 115 Advanced Engineering Design
Credit Hours: 3
Prerequisite: EDT 111 with a grade of C or higher. Students advance their CAD skills by working with complex parts and assemblies across multiple platforms. The course explores the challenges of industry-level workflows, combining digital processes with hands-on prototyping to ensure designs are functional, accurate, and ready for production.

EDT 120 Architectural Design
Credit Hours: 3
Prerequisite: None. Course offers the fundamentals of architectural design as it relates to light wood construction consistent with, but not limited to, residential construction. This course introduces building elements, Building Information Modeling (BIM) techniques, building code requirements, and professional and regional influences.

EDT 125 Architectural Applications
Credit Hours: 3
Prerequisite: EDT 120 with a grade of C or higher. Course will introduce students to architectural software widely used in the commercial field to produce architectural models and working drawings. Building Information Management (BIM), design development, construction documentation, and planning techniques relating to the software will be emphasized.

EDT 130 Manufacturing Design I
Credit Hours: 3
Prerequisite: None. Course will introduce students to the fundamentals of Solid Modeling software to produce parametric models, assemblies, presentations, and drawings for the manufacturing industry. Topics will include sketches, reference planes, relations, part modeling techniques, constraints, mates, evaluation tools, redesign, and presentation techniques.

EDT 132 Manufacturing Design II
Credit Hours: 3
Prerequisite: EDT 130 with a grade of C or higher. Advanced course presents different 3D and parametric solid modeling applications using Solid Modeling software. Studies include the development and generation of advanced 2D and 3D sketches, solid models, assemblies, presentations, and creating complex and detailed drawings, analyzing and testing solid models, and developing physical models with rapid prototyping equipment. Each student will complete

an individual design project involving a mechanical assembly with appropriate documentation.

EDT 140 Engineering Design for Industry
Credit Hours: 3
Prerequisite: EDT 111 with a grade of C or higher. Students work on hands-on design projects that address realworld industry and community needs. The course covers the full design process, emphasizing technical skills, problem-solving, collaboration, and communication. Students conclude by presenting their work to peers and professionals.

EDT 175 EDT Internship
Credit Hours: 4
Prerequisites: EDT 115 with a grade of C or higher and consent of program coordinator. Course offers a cooperative work experience within an industry setting for Engineering Design Technology students. Students work under the supervision of an approved professional or specialist in the engineering design field. The instructor is a coordinator between the student and the employer and monitors the internship. A minimum of 160 work (clock) hours on the job site is required for successful completion of the course. Students will submit progress reports and a final report documenting the work experience.

EDT 180 Problems in EDT
Credit Hours: 3
Prerequisites: EDT 115 with a grade of C or higher and Consent of Program Coordinator. Students design and lead their own learning through specialized topics or projects not covered in standard courses. Each experience is planned with the program coordinator to ensure it meets academic standards and supports the student's professional goals.

EDT 190 EDT Capstone
Credit Hours: 3
Prerequisites: EDT 115 with a grade of C or higher and consent of program coordinator. Student will complete a complex independent study project in an architectural, civil, mechanical, or another engineering design-related field with instructor input and guidance. The capstone course will promote critical thinking skills and technical resourcefulness while allowing students to broaden and show mastery of their engineering design skills.

EDUCATION (EDUC)

EDUC 108 Introduction to the Field of Education
Credit Hours: 0.5
Prerequisite: None. Course is a prerequisite requirement for all potential students seeking an AAT degree in Elementary Education or an AAS in Early Childhood Development. Topics will include professionalism in the field, mandatory background screenings, health requirements, membership in professional organizations, observations and participation in classroom experiences, exit exams, and employment opportunities. The Department of Elementary and Secondary Education standards will be introduced along with state certification and transfer degree options. This is a pass/fail course.

EDUC 110 Introduction to Physical Education in the Elementary School
Credit Hours: 2
Prerequisites: EDUC 108 and the successful completion of an approved background screening. Recommended for sophomore physical education majors and elementary education majors. Study of special methods and materials to be used in the teaching of elementary school physical education. Topics include course organization, teaching procedures and opportunities for integrating the physical education program with the school curriculum.

EDUC 180 Problems in Teacher Education
Credit Hours: 1 to 3
Prerequisite: Consent of program coordinator. Independent study of a special problem in teacher education under the supervision of the program coordinator.

EDUC 205 Teaching Profession with Field Experience
Credit Hours: 3
Prerequisites: EDUC 108 and the successful completion of an approved background screening and ENGL 101 with a grade of C or higher. Course provides an opportunity to observe teaching and learning for 30 hours or more in pre K-12 classrooms. Students are introduced to the requirements for teacher preparation and certification. Students will examine characteristics of effective teaching. Course is designed to assist students in determining if a career in teaching is an appropriate goal.

EDUC 209 Foundations of Education in a Diverse Society
Credit Hours: 3
Prerequisite: ENGL 101 with a grade of C or higher. Course examines the historical, philosophical, sociological, political, economic, and legal foundations of the American public education system. Students will explore the nature of

school environments, design and organization of school curricula, characteristics of effective schools, and instruction in grades pre K-12. Educational structures, practices and projections for the future will be studied.

EDUC 212 Educational Technology
Credit Hours: 3
Prerequisite: ENGL 070 with a grade of C or higher or equivalent placement scores. Students will learn to integrate instructional technology into the pre K-12 classrooms. Students will study a variety of software programs, presentation technology and telecommunication tools. Focus will also be on social, ethical, legal, and human issues surrounding the use of technology.

EDUC 218 Children's Literature
Credit Hours: 3
Prerequisites: EDUC 108 and the successful completion of an approved background screening and ENGL 070 with a grade of C or higher or equivalent placement scores. Intensive introduction to various genres of literature for children and ways of presenting literature in preschool, elementary or middle school.

EDUC 220 Educational Psychology
Credit Hours: 3
Prerequisite: PSY 101 or PSY 102 with a grade of C or higher. Course is designed to help students relate the application of psychological principles to teaching, learning and assessment, and the educational practice in pre K-12 classrooms. It will focus on the learner and the learning process, teacher characteristics and classroom processes that increase student motivation. Student diversity and appropriate instructional strategies for students with special needs will also be introduced. Writing papers in APA format is required.

EDUC 228 Education of Exceptional Learners pre K-12
Credit Hours: 3
Prerequisites: EDUC 108 and the successful completion of an approved background screening and ENGL 070 with a grade of C or higher or equivalent placement scores. This survey course is an introduction to the exceptional learners and their education in grades pre K-12. Course provides an opportunity to observe 15 clock hours in a pre k-12 special education classroom. Students will attain knowledge, skills and dispositions that will enable them to work effectively with exceptional learners in general education or special education. The course will cover the adaptations of daily activities in inclusive classrooms.

EDUC 240 Multicultural Education
Credit Hours: 3
Prerequisite: ENGL 101 with a grade of C or higher. Course is designed to examine the multicultural context of education and prepare students to understand and teach learners from diverse backgrounds, with diverse characteristics, and with differing social identities. The course will address issues of educational equity, sociocultural influences on teaching and learning, and how teachers and schools can contribute to interpersonal and intercultural understanding and respect, social justice, and democratic citizenship.

EDUC 250 Paraprofessional Educator Practicum
Credit Hours: 3
Prerequisites: EDUC 108 and the successful completion of an approved background screening, ENGL 101 with a grade of C or higher and consent of program coordinator. Students will actively participate, under supervision, in a paraprofessional setting for a total of 60 hours. Students will be responsible for implementation of duties assigned by the internship supervisor.

ENGLISH (ENGL)

ENGL 060 Foundations of English I
Credit Hours: 3
Prerequisite: Equivalent placement scores. Course is designed to develop students' critical reading and writing skills. Students will learn how to independently read and understand academic texts and respond to the ideas presented in those texts through well-written paragraphs. Successful completion requires a 70 percent in the course. Does not apply toward a degree or certificate.

ENGL 070 Foundations of English II
Credit Hours: 3
Prerequisite: ENGL 060 with a grade of C or higher or equivalent placement scores. Corequisite: ENGL 101. Course focuses on applying critical reading and writing skills for organizing, analyzing and retaining material and developing written work appropriate to the audience, purpose, situation, and length of the assignment. Students will learn how to independently read and understand academic texts and critically respond to the ideas presented in those texts via well-organized essays. Successful completion requires a 70 percent in the course. Does not apply toward a degree or certificate.

ENGL 101 English Composition I
Credit Hours: 3
MOTR Equivalent: MOTR ENGL 100 – Composition I
Prerequisite: ENGL 070 as a corequisite or with a grade of C or higher or equivalent placement scores. Emphasizes planning, drafting and revising along with critical thinking and information management skills and their role in communicating concise written ideas to a range of audiences for a variety of purposes. Basic computer skills are essential for successful completion.

ENGL 102 English Composition II
Credit Hours: 3
MOTR Equivalent: MOTR ENGL 200 – Composition II
Prerequisite: ENGL 101 with a grade of C or higher. Combines the process writing techniques acquired in ENGL 101 with high order reasoning and advanced research skills to communicate ideas in meaningful and effective writing. Basic computer skills are essential for successful completion.

ENGL 106 Creative Writing
Credit Hours: 3
MOTR Equivalent: MOTR PERF 106 – Creative Writing
Prerequisite: None. Study and practice in the techniques of writing poetry, fiction, nonfiction and/or drama. Emphasis is placed on the recognition of those techniques in published works and their utilization in original work. Peer evaluation and individual conferences with the instructor are employed.

ENGL 110 Communication for Business and Industry
Credit Hours: 3
Prerequisite: ENGL 060 with a grade of C or higher or equivalent placement scores. In-depth study of effective communication techniques and demeanor as applied in business and industry situations.

ENGL 130 Scriptwriting
Credit Hours: 3
Prerequisite: ENGL 070 with a grade of C or higher or equivalent placement scores. Course explores the fundamental process of writing short scripts for film, theatre, and television. Students will learn to develop plot, style, characters, dialogue, setting, mood, and formatting as they draft and revise 10 to 15 minute scripts for reading in class and potential production. Course includes lecture, group work and presentations.

ENGINEERING (ENGR)

ENGR 200 Engineering Seminar
Credit Hours: 2
Prerequisite: None. Students will explore the engineering profession through interdisciplinary design exposure, departmental overviews, industry guest lectures, and a project that involves cost-benefit analysis. Emphasis is placed on career exploration, professional expectations, and pathways within engineering.

ENGR 235 Engineering Statics
Credit Hours: 3
Prerequisite: PHYS 211 with a grade of C or higher. Application of the principles of mechanics to engineering problems of equilibrium. Topics include resultants, equilibrium, friction, trusses, center of gravity, and moment of inertia.

FIRE SCIENCE (FIRE)

FIRE 132 Introduction to Emergency Services
Credit Hours: 3
Prerequisite: None. Course provides an overview of fire protection, career opportunities in fire protection and related fields, philosophy and history of fire protection/service, fire loss analysis, organization and function of public and private fire protection services, fire departments as part of local government, laws and regulations affecting the fire service, fire service nomenclature, specific fire protection functions, basic fire chemistry and physics, introduction to fire protection systems, introduction to fire strategy and tactics.

FIRE 133 Fire Behavior and Combustion
Credit Hours: 3
Prerequisite: None. Categorizes the components of fire and explains the physical and chemical properties of fire. Provides an understanding of basic fire chemistry, the fire combustion process, general fire behavior, the development of a compartment fire, and how fire behavior impacts the safety of firefighters.

FIRE 134 Fire Prevention
Credit Hours: 3
Prerequisite: None. Course provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of fire hazards, and the relationships of fire prevention with built - in fire protection systems, fire investigation, and fire and life-safety education.

FIRE 135 Fire Safety and Survival
Credit Hours: 3
Prerequisite: None. Course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavioral change throughout the emergency services.

FIRE 136 Building Construction for Fire
Credit Hours: 3
Prerequisite: None. Course provides the components of building construction that relate to fire and life safety. The focus of this course is on firefighter safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at emergencies.

FIRE 137 Fire Protection Systems
Credit Hours: 3
Prerequisite: None. Course provides information relating to the features of design and operation of fire alarm systems, water - based fire suppression systems, special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers.

FIRE 138 Fire Investigations
Credit Hours: 3
Prerequisite: None. Course is intended to provide the student with the fundamentals and technical knowledge needed for proper fire scene analysis and interpretations, including recognizing and conducting origin and cause, preservation of evidence, evidence collection, scene documentation, scene security, motives of the fire setter, and types of fire causes.

FIRE 139 Tactics and Strategies
Credit Hours: 3
Prerequisite: None. Course provides an in-depth analysis of the principles of fire control through utilization of personnel, equipment, and extinguishing agents on the fire ground. The course will cover aspects of incident command, company operations, special situations and occupancies, and post incident activities.

FIRE 140 Hydraulics and Water
Credit Hours: 3
Prerequisite: None. Course provides a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems.

FIRE 141 Fire Leadership
Credit Hours: 3
Prerequisite: None. Course introduces the student to the organization and management of a fire department and the relationship of government agencies to the fire service. Emphasis will be placed on fire service leadership from the perspective of various positions.

FIRE 142 Introduction to Hazardous Materials
Credit Hours: 3
Prerequisite: None. This course provides an introduction to the fundamentals of hazardous materials management, focusing on the safe and effective response to such incidents. In this course, students will obtain a thorough understanding of hazard identification, risk assessment, incident management, safety protocols and legal regulations. Students will learn to handle HazMat incidents following standard procedures and best practices.

FIRE 143 Introduction to Emergency Management
Credit Hours: 3
Prerequisite: None. This course provides a comprehensive introduction to the field of emergency management, focusing on its principles, concepts and practices. Students will gain a foundational understanding of the entire emergency management system Ã¢â‚¬â€œ mitigation preparedness, response and recovery. The course will cover the history of emergency management, the roles and responsibilities of various stakeholders, and the integration of emergency management with public policy and homeland security.

FIRE 144 Fire Service Administration
Credit Hours: 3
Prerequisite: None. This course is designed to provide a comprehensive understanding of the roles, responsibilities, and challenges faced by fire officers and administrators. The course will explore leadership, human resources, risk management, and fire service operations. The course incorporates a mix of theoretical knowledge and practical application to help future fire officers become effective leaders.

FIRE 145 Fire Codes and Inspection Principles
Credit Hours: 3
Prerequisite: None. This course is designed to provide an in-depth understanding of fire codes, inspection principles and regulatory compliance with fire protection. The course covers the critical elements of fire codes, the inspection process, code enforcement and the role of fire prevention in community safety. Students will learn the fundamentals of fire code compliance, legal aspects of inspections and the practical application of fire protection standards.

FIRE 146 Legal Considerations for Emergency Services
Credit Hours: 3
Prerequisite: None. This course provides an overview of the legal issues affecting fire and emergency services, focusing on federal and state laws, liability, labor relations and relevant case law. The course will help students understand their legal obligations and how to manage legal risks.

FIRE 147 Political Sciences for Emergency Services
Credit Hours: 3
Prerequisite: None. This course introduces students to the intersection of political science, public policy, and emergency services. It examines how political decisions shape disaster policy and homeland security, the role of government institutions, the influence of political actors and the legal and ethical dimensions of emergency management. The course will provide students with a comprehensive understanding of how political and policy frameworks impact disaster preparedness, response, and recovery efforts.

FRENCH (FREN)

FREN 101 Elementary French I
Credit Hours: 3
MOTR Equivalent: MOTR LANG 101 – French I
Prerequisite: None. Begins the four basic skills of language communication: listening, speaking, reading, and writing. Includes an introduction to the French culture.

FREN 102 Elementary French II
Credit Hours: 3
MOTR Equivalent: MOTR LANG 102 – French II
Prerequisite: FREN 101 with a grade of C or higher. Continuation of FREN 101 for further development of the four basic skills of language communication: listening, speaking, reading, and writing. Continues study of French culture.

FREN 201 Intermediate French I
Credit Hours: 3
Prerequisite: FREN 102 with a grade of C or higher. Course continues the study of French language and culture with a focus on communication and proficiency.

FREN 202 Intermediate French II
Credit Hours: 3
Prerequisite: FREN 201 with a grade of C or higher. Course continues the study of French language and culture with a focus on communication and proficiency.

FREN 210 Special Topics in French
Credit Hours: 1 to 3
Prerequisite: FREN 101, FREN 102, FREN 201, and FREN 202 with grades of C or higher. Independent study under the supervision of a French instructor.

GEOGRAPHY (GEOG)

GEOG 101 World Geography
Credit Hours: 3
MOTR Equivalent: MOTR GEOG 101 – World Regional Geography
Prerequisite: None. This introductory geography course surveys the processes of the earth's formation, climates and biomes, human culture and institutions, global environmental issues, and interactions within the global village. Designed for prospective elementary and social studies teachers, as well as general education students.

GERMAN (GERM)

GERM 101 Elementary German I
Credit Hours: 3
MOTR Equivalent: MOTR LANG 105 – Foreign Language I
Prerequisite: None. Begins the four basic skills of language communication: listening, speaking, reading, and writing. Includes an introduction to the German culture. Concentrates on the present indicative tense with the course conducted primarily in German.

GERM 102 Elementary German II
Credit Hours: 3
MOTR Equivalent: MOTR LANG 106 – Foreign Language II
Prerequisite: GERM 101 with a grade of C or higher. Continuation of GERM 101 for further development of the four basic skills of language communication: listening, speaking, reading, and writing. Continues study of the German culture.

HEALTH OCCUPATIONS (HEOC)

HEOC 119 Medical Terminology
Credit Hours: 3
Prerequisite: None. Acquire a medical terminology vocabulary related to body systems necessary to communicate information in a health care environment. Focuses on the principles of medical word formation, including the basic rules of building medical words, identifying suffixes, prefixes, and combining forms related to the structure and function of the associated systems of

the body. Concentration is on pronunciation, spelling and definitions of medical terms.

HEOC 135 Allied Health Career Development
Credit Hours: 0.5
Prerequisite: None. Focuses on developing health care career potential. The job search process is presented step-by-step. Guest speakers, group activities and mock interviews will be utilized, and resumes will be constructed. Internet sites to assist in resume writing and job searches will be explored.

HEOC 146 Phlebotomy
Credit Hours: 6
Prerequisite: Consent of program coordinator. Course is designed to provide students with knowledge, skills and techniques necessary to perform as a phlebotomist in the clinical setting. Students will learn various procedures and laboratory techniques in handling human blood and/or body fluids. Students are required to complete online coursework, attend one on-ground hands-on day on the Sedalia campus, and complete 100 clinical hours. Students must satisfactorily perform in a laboratory setting as well as pass written tests.

HEOC 152 Certified Nurse Assistant
Credit Hours: 6
Prerequisite: Consent of program coordinator. Corequisite: HEOC 155. Certified Nurse Assistant training prepares individuals for employment in a long-term care facility while teaching skills in resident care under the direct supervision of a licensed nurse. CNA and CNA Clinical will meet state requirements for CNA training. Additional state mandated requirements may be required to be employed as a CNA in a long-term care facility. Note: If a student passes HEOC 152 but does not pass HEOC 155, the student will have one additional semester to retake HEOC 155 from a regularly scheduled State Fair Community College course. Any retake of HEOC 155 after one semester will require that HEOC 152 be retaken.

HEOC 155 Certified Nurse Assistant Clinical
Credit Hours: 2
Prerequisite: Consent of program coordinator. Corequisite: HEOC 152. Clinical provides 100 hours of on the job training with state approved clinical supervisors in a long-term care facility. At the conclusion of the clinical sessions, students who pass the course will be qualified to apply through Headmaster to take the two-part, state approved knowledge and skills examination. This is a pass/fail course.

HEOC 158 Certified Medication Technician
Credit Hours: 4
Prerequisites: Consent of program coordinator and an active listing on the Missouri CNA Registry. Corequisite: HEOC 160. This Certified Medication Technician training program prepares individuals for employment in a long-term care facility. Skills are taught in administration of nonparental medications to assist licensed practical nurses (LPNs) or registered nurses (RNs) in medication therapy. Training consists of at least 60 hours of classroom instruction. Upon successful completion of both this course and HEOC 160, the student will be eligible to take the final exam to become a certified medication technician through the Missouri Department of Health and Senior Services.

HEOC 160 Certified Medication Technician Clinical
Credit Hours: 1
Prerequisite: Consent of program coordinator. Corequisite: HEOC 158. Training includes at least 15 hours of clinical practice under direct supervision. The student will participate in administering non-parenteral medications in a long-term care facility. This is a pass/fail course.

HEOC 180 Problems in Health Occupations
Credit Hours: 1 to 3
Prerequisite: Consent of instructor. Independent study of a special problem in health care under the supervision of a Health Sciences instructor.

HISTORY (HIST)

HIST 101 US History Before 1877
Credit Hours: 3
MOTR Equivalent: MOTR HIST 101 – American History
Prerequisite: None. Survey of the political, economic and social development of the United States from its European origins through the reconstruction process. A study of the Missouri Constitution is included to meet the state's requirements in Senate Bill No. 4. Students will also pass the Missouri Higher Education Civics Exam with a 70 percent or higher in compliance with Senate Bill No. 807.

HIST 102 US History Since 1877
Credit Hours: 3
MOTR Equivalent: MOTR HIST 102 – American History II
Prerequisite: None. Survey of the political, economic, social, and military development of the United States from 1877 to the present. A study of the Missouri Constitution is included to meet the state's requirements in Senate Bill No. 4. Students will also pass the Missouri Higher Education Civic Exam with a 70 percent or higher in compliance with Senate Bill No. 807.

HIST 108 World History Before 1500
Credit Hours: 3
MOTR Equivalent: MOTR HIST 201 – World History I
Prerequisite: None. Survey of the political, social, military, cultural and religious history of Europe, Asia, and Africa from human societies to 1500.

HIST 109 World History After 1500
Credit Hours: 3
MOTR Equivalent: MOTR HIST 202 – World History II
Prerequisite: None. Survey of the political, social, military, cultural, economic and ideological history of Europe, Asia, the Americas, and Africa from 1500 to the end of the Cold War.

HIST 180 Problems in History
Credit Hours: 1 to 3
Prerequisites: ENGL 070 with a grade of C or higher or equivalent placement scores and consent of instructor. Independent study of a special problem in history under the supervision of the lead history instructor.

HEALTH INFORMATION TECHNOLOGY (HIT)

HIT 100 Introduction to Health Information Technology
Credit Hours: 3
Prerequisite: None. Introduction to the health care field and health information management. The health record is analyzed for content and use as it relates to documentation requirements, health care personnel responsibility, security, and organizational structure. Addresses the current and future direction of health information management.

HIT 105 Health Care Technologies
Credit Hours: 3
Prerequisite: None. Covers the basics of electronic health records, general healthcare computer systems, data retrieval, and other EHR system topics with a focus on how these systems and issues affect healthcare.

HIT 115 Health Care and the Law
Credit Hours: 3
Prerequisite: HIT 100 with a grade of C or higher. Corequisite: HIT 100. Course covers medical records as legal documents focusing on procedures involved in court disclosure of medical records; laws pertaining to release of information from medical records; and medical record requirements for accrediting, approving, licensing, and certifying agencies. Covers laws and regulations governing preparation and use of medical records, responsibilities of physician, risk of malpractice, and physician's role in the hospital.

HIT 200 Health Care Statistics and Data Analysis
Credit Hours: 3
Prerequisite: MATH 119 with a grade of C or higher or equivalent placement score. Course covers the practical applications of health information management concepts as they apply to health care data collection, calculating inpatient hospital statistics, analyzing statistical outcomes, comparing and benchmarking facility data to national statistics, and other providers of service. Students will also demonstrate management skills in presenting data and making recommendations based on statistical outcomes.

HIT 204 Coding I
Credit Hours: 3
Prerequisites: BIO 103, HEOC 119, and HIT 224 with grades of C or higher. Corequisite: HIT 224. Overview of the ICD-10-CM (International Classification of Diseases, 10th Revision, Clinical Modification) code book with basic coding assignment/guidelines instructions. Initial preparation for CCA Exam - AHIMA.

HIT 206 Coding II
Credit Hours: 3
Prerequisite: HIT 204 with a grade of C or higher. Continuation of HIT 204 with the overview of the ICD-10-PCS (International Classification of Diseases, 10th Revision, Procedure Coding System) and CPT (Current Procedural Terminology) code book with basic coding assignment/guidelines. Continuation of preparation for the AHIMA CCA Exam.

HIT 208 Coding III
Credit Hours: 3
Prerequisites: HIT 206 and HIT 224 with grades of C or higher. Continuation of HIT 204 and HIT 206. The focus is on an intense simulation of actual coding practices on all major body systems. Students will study for and complete the AHIMA CCA exam; upon passing, the student will be eligible for the CCA credential.

HIT 212 Project Management for Health Information
Credit Hours: 3
Prerequisite: HIT 105 with a grade of C or higher. This course covers project management principles in health information systems, with a focus on real-world application. Students will apply the Systems Development Life Cycle (SDLC) to plan, design, implement, and evaluate health IT projects. Through hands-on experience, they will develop the skills to manage and contribute to projects that

enhance data integrity, improve processes, and support quality patient care.

HIT 215 Principles of Health Care Reimbursement
Credit Hours: 3
Prerequisites: HIT 206 with a grade of C or higher. Course provides an understanding of the various payment systems and how reimbursement affects providers, payers, consumers, and policy makers. Explanation will be given of the managed care, commercial insurance, and government-sponsored payment systems. The student will compare and contrast systems and how to use related resources for accurate reimbursement.

HIT 216 Auditing Outpatient Coding
Credit Hours: 2
Prerequisite: HIT 208 with a grade of C or higher. Through focused instruction and applied exercises, students will gain the competencies necessary to accurately audit outpatient encounters and ensure compliance with regulatory and reimbursement standards. Emphasis will be placed on charge review and capture, billing requirements, audit edits, and documentation standards.

HIT 217 Health Data Literacy
Credit Hours: 1
Prerequisite: HIT 230 with a grade of C or higher. Corequisite: HIT 230. Students will practice methods to evaluate the quality and reliability of health data while advancing their skills in data analysis and reporting.

HIT 218 Clinical Documentation Improvement
Credit Hours: 1
Prerequisite: HIT 215 with a grade of C or higher. Students will explore documentation integrity standards, compliance requirements, and best practices that support accurate coding, reimbursement, and quality reporting. Designed for students with foundational knowledge of health information practices, this course provides practical strategies to enhance data integrity and promote high-quality healthcare outcomes.

HIT 219 Release of Information
Credit Hours: 1
Prerequisite: HIT 115 with a grade of C or higher. This course reinforces the principles of releasing health information within ethical, legal, and regulatory frameworks. Emphasis is placed on accuracy, confidentiality, and professional responsibility in handling medical information.

HIT 220 Health Information Management
Credit Hours: 3
Prerequisite: HIT 100 with grades of C or higher. Course covers concepts of management as they apply to the health information management profession. The course will introduce management policies as they relate to the delivery of healthcare; accounting methodologies, policies, and practices that support an ethical and culturally diverse workforce; managing and leading during organizational change; and process improvement.

HIT 221 Healthcare Privacy and Security
Credit Hours: 2
Prerequisite: HIT 105 and HIT 115 with a grade of C or higher. This course strengthens understanding of healthcare privacy and security by focusing on ethical, legal, and regulatory requirements. Students will explore program management, physical and technical safeguards, and risk assessment strategies. Key topics include incident investigation, compliance oversight, and enforcement practices. The course builds essential competencies for safeguarding health information in diverse healthcare environments.

HIT 224 Human Disease and Conditions
Credit Hours: 3
Prerequisites: BIO 103 and HEOC 119 with grades of C or higher. Introduction to the nature of disease and its effects on body systems. Course deals with the disease processes of the more common clinical disorders. Signs, symptoms, diagnosis, treatment, and preventions are covered. Students will identify most commonly used laboratory and diagnostic tests, as well as prescribed drugs used in the treatment of diseases.

HIT 230 Introduction to Healthcare Informatics
Credit Hours: 3
Prerequisite: HIT 105 with a grade of C or higher. This foundational course provides an overview of the rapidly evolving field of health informatics, emphasizing the intersection of healthcare, information technology, and data management. Designed for students pursuing careers in health information management, healthcare administration, or clinical settings, this course builds a critical understanding of how informatics supports evidence-based practice and patient-centered care.

HIT 275 Professional Practice Experience
Credit Hours: 3
Prerequisite: Consent of program coordinator. This course prepares students in making the transition into the Health Information Management (HIM) career field by applying all program coursework and testing professional competencies

needed for employment. The student will be placed in a healthcare setting requiring 80 to 120 hours of application. Simultaneously requiring online coursework consisting of preparation and review to be prepared to take the Registered Health Information Technician (RHIT) credential exam. Students are required to register and attempt the credential exam as a requirement of this course.

HEALTH (HLTH)

HLTH 101 Personal Health and Fitness
Credit Hours: 2
Prerequisite: None. Presents a basic knowledge of physical fitness and personal fitness; the human body, personal hygiene, food and nutrition, diet and weight control, and mental health; alcohol, narcotics and drug abuse education; and protection against communicable diseases and other health hazards.

HLTH 102 First Aid
Credit Hours: 2
Prerequisite: None. Prepares the student to make appropriate decisions regarding first aid care in minor or life-threatening situations. Course focuses on basic first aid techniques and when to call emergency medical services. Cardiopulmonary resuscitation (CPR) and relief of airway obstruction of the adult, child and infant, as well as use of the automated external defibrillator (AED) for the adult and child, are included in the course. American Red Cross certification cards are given for First Aid and CPR upon completion of the course.

HEATING, VENTILATION, AC (HVAC)

HVAC 102 HVAC Fundamentals I
Credit Hours: 3
Prerequisite: None. Introduction of the theory of heat and the history of HVAC. It also gives the scientific terminology and definition to the components of heat and heat transfer in order to create the basic understanding of refrigeration, refrigerants, the components that make up the refrigeration cycle, and also the measures needed to assure safety in this industry.

HVAC 104 HVAC Fundamentals II
Credit Hours: 3
Prerequisite: HVAC 102 with a grade of C or higher. This course continues the teaching of HVAC Fundamentals starting with the tools and equipment that are needed to be effective and productive, along with how to put them to use properly. It also covers the types of piping and tubing, soldering and brazing, as well as refrigerant usage, leak detection, evacuation, and system charging.

HVAC 106 HVAC Schematics
Credit Hours: 2
Prerequisite: HVAC 112 with a grade of C or higher. Students will learn to read, draw, and interpret wiring diagrams from various HVAC units and familiarize themselves with the nomenclature of symbols and electric circuitry that applies to the HVAC industry.

HVAC 108 HVAC Motors & Components
Credit Hours: 3
Prerequisite: HVAC 112 with a grade of C or higher. The student will study the types of electrical current and how they are produced and distributed. They will also learn about the different types of electric motors and their controls, their purpose, and how they operate, as well as how to replace or make repairs.

HVAC 110 Refrigeration & Diagnostics
Credit Hours: 3
Prerequisites: HVAC 112 with a grade of C or higher. Introduction to refrigeration diagnostics. Explains the more advanced theory of refrigeration along with the refrigeration cycle and its components. It teaches various techniques with refrigerant charging and testing, along with advanced troubleshooting techniques.

HVAC 112 Basics in HVAC Electrical
Credit Hours: 3
Prerequisite: IEM 102 and HVAC 102 with grades of C or higher. Application of electrical principles in HVAC/R systems with an emphasis on controls, components, and system diagnostics. Students learn to use a Digital Multi-Meter and how it applies to the electrical components and safety controls commonly used in residential and light commercial equipment. Instruction focuses on reading basic wiring diagrams, measuring system performance with meters, and applying safe and accurate troubleshooting procedures to restore system operation.

HVAC 120 Heating Systems
Credit Hours: 3
Prerequisite: HVAC 104 with a grade of C or higher. This course explains the different types of heating systems available and how they each operate in the environment in which they have been designed for.

HVAC 130 Air Flow Fundamentals
Credit Hours: 3
Prerequisite: HVAC 104 with a grade of C or higher. In this course, students will learn about cooling systems and

comfort control. They will also be instructed on the importance of air quality how to calculate and achieve proper air distribution.

HVAC 132 HVAC Installation and Evaluation
Credit Hours: 3
Prerequisite: MATH 107 with a grade of C or higher and HVAC 104 with a grade of C or higher. This course is designed to show the student how to assess a structures quality and determine what it takes to make it more efficient. In this course the student will also find out how to calculate heat gain and heat loss for the purpose of new installation, replacement systems, or system repairs.

HVAC 134 Heat Pumps
Credit Hours: 2
Prerequisite: HVAC 104 with a grade of C or higher. This course teaches the types of heat pumps and how they are applied to an HVAC system as well as the various components how they work with each specific unit.

HVAC 136 EPA 608
Credit Hours: 1
Prerequisite: HVAC 104 with a grade of C or higher. This course covers the requirements for the EPA certification examinations. It will include the up to date federal regulations that will allow students to know the proper procedures of servicing, recycling, recovering, and reclaiming refrigerants in systems and the laws that protect our environment.

HVAC 140 Commercial Air Conditioning
Credit Hours: 2
Prerequisite: HVAC 104 with a grade of C or higher. This course will instruct the student on the commercial side of HVAC/R by exploring the various types of chillers, cooling towers and rooftop units used in the commercial industry as well as their components and refrigerants, and how they are operated and maintained.

HVAC 160 HVAC Automation Systems
Credit Hours: 3
Prerequisite: HVAC 104 with a grade of C or higher. This course covers the requirements for the EPA certification examinations. It will include the up to date federal regulations that will allow students to know the proper procedures of servicing, recycling, recovering, and reclaiming refrigerants in systems and the laws that protect our environment.

HVAC 175 HVAC Internship
Credit Hours: 4
Prerequisite: Consent of program coordinator. Course is designed to provide the student an opportunity to demonstrate work skills, work ethics, and the ability to work with others in a cooperative work experience within an industry setting. Students work under the supervision of an approved professional or specialist in the field. A minimum of 160 work (clock) hours on the job site is required for successful completion of the course.

HVAC 180 HVAC Special Problems
Credit Hours: 4
Prerequisite: Consent of program coordinator. Course is designed to provide the student an opportunity to demonstrate work skills, work ethics and the ability to work with others in a cooperative work experience within an industry setting. Students work under the supervision of an approved professional or specialist in the field. A minimum of 160 work (clock) hours on the job site is required for successful completion of the course.

INDUSTRIAL ELECTRICAL MAINTENANCE (IEM)

IEM 102 Electric Fundamentals
Credit Hours: 3
Prerequisite: None. Introduction to electrical theory. Topics include direct current, alternating current, electrical quantities and values, Ohm's Law, electric generation, energy conversion, magnetism, electromagnetism, series, parallel, and combination circuits.

IEM 104 Electrical Power
Credit Hours: 3
Prerequisite: IEM 102 with a grade of C or higher. Continuation of electrical studies in alternating current (AC), inductance, capacitance, reactance, power factor, and the application of electrical power in industry, single and poly-phase transformers, and wye and delta systems.

IEM 106 Industrial Mechanics
Credit Hours: 3
Prerequisite: None. Course includes principles and applications of industrial mechanics, including tools, hardware, installation and maintenance of bearings, gear systems, belt drives, mechanical drives, principles of lubrication, vibration, and alignment.

IEM 107 Introduction to Robotics
Credit Hours: 3
Prerequisite: IEM 102 with a grade of C or higher. Course is designed for someone who has no experience with robotics and has little to no experience with electronics, electricity, and motors. Course breaks down the physical components that make up a robot, terminology, and mathematical equations for basic design needs. The course will cover safety, understanding a robot's operational umbrella, tooling designs and applications, end-of-arm tooling (EOAT), power transmission systems, and basics of programming, troubleshooting, and maintenance. Course will provide hands-on exposure using an industrial robot(s).

IEM 108 Fluid Power Technology
Credit Hours: 3
Prerequisite: None. Course covers principles and applications of fluid power technology in industrial systems including operating, troubleshooting and maintaining hydraulic and pneumatic pressure; flow, directional control, and electrical devices; conduits, pumps, compressors, actuators, and ancillary devices; and conditioning and filtration of fluids. Critical thinking and analytical skills are emphasized.

IEM 109 Robotics Automation Technician I
Credit Hours: 3
Prerequisite: IEM 107 with a grade of C or higher. Course is designed to provide more hands on experience and exercise for programming six axis robotic arms. Students will learn the programming functions beyond basics, and explore more operational performance features of robotics using an input sensory systems. Course will provide hands on exposure using an industrial robot(s).

IEM 112 Control Circuit Troubleshooting
Credit Hours: 3
Prerequisite: IEM 104 or HVAC 112 with a grade of C or higher. Introduction to the devices and components of industrial automation, sensors, switches, fluid power components, and a combination of technologies in manufacturing systems and industrial processes. Primary emphasis on interpreting line diagrams and troubleshooting control circuits.

IEM 114 Motor Controls
Credit Hours: 3
Prerequisite: IEM 112 with a grade of C or higher. Course is designed to teach students how to construct, troubleshoot and isolate malfunctions in various types of control circuits and motor starters and understand application and installation of control devices and basic principles, operation, components, and application of AC drives.

IEM 122 Introduction to PLCs
Credit Hours: 3
Prerequisite: IEM 102 with a grade of C or higher. Introduction to hardware and software of programmable logic controllers (PLCs). Course is designed to instruct students in the operating system of PLCs, configuration of hardware and communications, number systems, logic circuits, and basic programming. The ability to perform basic computer operations is necessary.

IEM 124 Intermediate PLCs
Credit Hours: 3
Prerequisite: IEM 122 with a grade of C or higher. Study of the interface between machine and controller, advanced programming functions and troubleshooting. Emphasis is on developing programs and interfacing with industrial type devices.

IEM 126 Industrial Safety
Credit Hours: 3
Prerequisite: None. Comprehensive study of requirements and programs of 29 Code of Federal Regulations (CFR) 1910. Application of safe work practices to industrial maintenance and manufacturing, including machine guarding, confined space, lockout/tagout, hazardous communication, electrical and fire safety, personal protective equipment, and more. Additional topics selected based on student interest and industry emphasis.

IEM 128 Maintenance Management
Credit Hours: 3
Prerequisite: None. Study of contemporary maintenance management practices, statistical applications, total productive maintenance, reliability-based procedures, predictive (PDM) and preventive (PM) maintenance, coordinate measuring machine (CMM) systems, nondestructive testing, and project management.

IEM 130 Principles of Refrigeration
Credit Hours: 3
Prerequisite: None. Study of the principles of refrigeration, refrigerants, components, types of systems, operation, electrical controls, troubleshooting, servicing, and maintenance. Critical thinking and analytical skills are emphasized.

IEM 132 Advanced PLCs
Credit Hours: 3
Prerequisite: IEM 124 with a grade of C or higher. Study of the hardware that is programmed with RSLogix 5000. Course is designed for students who already understand

RSLogix 500 and are ready to advance to Tag based programming.

IEM 134 PLC Networks
Credit Hours: 3
Prerequisite: IEM 132 with a grade of C or higher. Course will cover the installation, operation, inspection, and maintenance of industrial communication networks using serial RS232, Ethernet and data bus. Examines various interface devices used in communication and integration of these devices with computers, PLCs and web-enabled technology.

IEM 136 General NEC Requirements
Credit Hours: 3
Prerequisite: IEM 104 with a grade of C or higher. Students learn to understand and apply the code to general industrial applications, wiring and protection, wiring methods and materials, and general equipment. Based on the general requirements of the National Electrical Code (NEC).

IEM 138 Power Distribution and Switchgear
Credit Hours: 3
Prerequisite: IEM 136. Course will cover the installation, operation, inspection, and maintenance of industrial electrical power systems, and motor control centers; voltage, current and instrument transformers; feeder circuits and busways; switches and circuit breakers; protective devices; regulating devices; and neutral and grounding systems using the National Electric Code (NEC) as a reference.

IEM 140 Transformers and Motors
Credit Hours: 3
Prerequisite: IEM 104 with a grade of C or higher. Course examines the principles, construction, types, and applications of transformers and motors, including DC generators and motors, alternators and AC motors. Transformers and AC motors applications include single-phase and poly-phase, wye and delta.

IEM 150 Applications in IEM Problem Solving
Credit Hours: 1 to 4
Prerequisite: None. Designed to allow a company to utilize an instructor to facilitate an actual problem or improvement project with a group of students or company employees and for individualized special instruction by the instructor.

IEM 175 IEM Internship
Credit Hours: 4 to 8
Prerequisites: Completion of 30 technical credit hours and consent of program coordinator. Application of work skills in a supervised work environment. Companies that sponsor internships provide the supervision. The college provides general guidance and works with the sponsoring company in developing an outline of the work experiences unique to the site. Course is designed to provide the student an opportunity to demonstrate work skills, work ethics and the ability to work with others. In addition to completing the training plan, the student must submit four to eight written technical reports.

IEM 180 Problems in IEM
Credit Hours: 1 to 3
Prerequisite: None. Independent study of a special problem in Industrial Electrical Maintenance under the supervision of an Industrial Electrical Maintenance instructor or industry partner.

INDUSTRIAL TECHNOLOGY (INDT)

INDT 140 Mechanical and Fluid Power Principles
Credit Hours: 3
Prerequisite: None. Course includes industrial technology principles and applications involving tools, hardware, mechanical advantage, bearings, belt and gear drives, lubrication, alignment, vibration, as well as fluid power systems, pressure, flow and directional controls, actuators, conduits, pumps, fluid conditioning, and a minor emphasis on maintenance/troubleshooting.

INDT 142 Principles of Electricity
Credit Hours: 3
Prerequisite: None. Course includes industrial technology principles and applications involving electrical topics of direct current, alternating current and electrical quantities and values. Topics also include Ohm's Law, electric generation, energy conversion, magnetism, electromagnetism, as well as series, parallel and combination circuits, inductance, capacitance, reactance, power factor, the application of electrical power in industry, single and poly-phase transformers, and wye and delta systems.

INDT 144 Machine Controls
Credit Hours: 3
Prerequisite: None. Course includes industrial technology principles and applications involving the devices and components of industrial automation; relays, sensors and switches; fluid power components, motor starters and drives; combination of technologies in the systems of manufacturing and industrial processes; and an introduction to line diagrams of control circuits and troubleshooting.

LITERATURE (LIT)

LIT 101 Introduction to Literature
Credit Hours: 3
MOTR Equivalent: MOTR LITR 100 – Introduction to Literature
Prerequisite: ENGL 070 with a grade of C or higher or equivalent placement scores. Study of fiction, poetry and drama. Special attention is given to literary terminology and critical analysis. Recommended but not required as a preparation for other courses in literature.

LIT 107 American Literature
Credit Hours: 3
MOTR Equivalent: MOTR LITR 101 – American Literature
Prerequisite: ENGL 070 with a grade of C or higher or equivalent placement scores. Study of major American authors and works from the Colonial Period to the present, emphasizing development of concepts that have shaped American life and literature.

LIT 109 British Literature
Credit Hours: 3
MOTR Equivalent: MOTR LITR 102 – British Literature
Prerequisite: ENGL 070 with a grade of C or higher or equivalent placement scores. Study of major English authors, genres and works from Beowulf to the present, emphasizing the development of concepts that have shaped English life and literature.

LIT 112 World Literature
Credit Hours: 3
MOTR Equivalent: MOTR LITR 200 – World Literature
Prerequisite: ENGL 070 with a grade of C or higher or equivalent placement scores. Students will examine selected works of various Asian, African and European literature in translation from the ancient world to the 20th century.

LIT 114 Topics in Literature
Credit Hours: 3
Prerequisite: ENGL 070 with a grade of C or higher or equivalent placement scores. Study of a major writer, a literary type or a theme in literature. Specific subjects are announced each semester in which the course is offered.

MACHINE TOOL (MACH)

MACH 101 Introduction to Machining
Credit Hours: 4
Prerequisite: None. Introduces the proper setup and use of drilling machines, band saws, and manual lathes. Theories will include the use of tools and tool holders, and cutting tool applications. Outer diameter (OD) turning applications include facing, turning, taper turning, and knurling on the lathe. Hole-making applications include drilling and reaming holes on the lathe. Areas of study include safety, blueprint interpretation, hand tools, layout, and various gauges. The course also introduces precision measuring instruments used to complete and inspect a machined part. (1 lecture, 3 lab)

MACH 102 Lathe and Milling Machine Operations
Credit Hours: 4
Prerequisite: MACH 101 with a grade of C or higher. Continuation in the application of lathe operations, including outer diameter (OD) turning, threading, tapering, and the art of grinding a lathe turning tool. Students will also learn to sharpen drills for optimal performance. Introduces the proper use and setup of the vertical milling machine, with applications including edge finding and performing milling, drilling, tapping, and reaming operations. Areas of study include safety, blueprint interpretation, and the selection of cutters, feeds, and speeds. (1 lecture, 3 lab)

MACH 103 Milling and Grinding Machine Applications
Credit Hours: 4
Prerequisite: MACH 102 with a grade of C or higher. Corequisite: MACH 102. Continuation of milling machine operations, including precise machine movements, milling parts in preparation for surface grinding. Introduces surface grinding operations, covering wheel selection, truing and dressing, work holding methods, and problem-solving in surface grinding. The course also covers the use of milling and grinding precision tools and heat-treating tool steels. Areas of study include safety, blueprint interpretation, and the proper setup and use of milling and grinding attachments. (1 lecture, 3 lab)

MACH 104 Advanced Machining
Credit Hours: 4
Prerequisite: MACH 103 with a grade of C or higher. This course involves manufacturing a functioning precision machinist vise. Students will cover advanced techniques in manual milling, surface grinding, and manual lathe operations. They will also learn about the importance of

efficiency and the application of GD&T (Geometric Dimensioning and Tolerancing) stack-ups. (1 lecture, 3 lab)

MACH 105 Metrology
Credit Hours: 4
Prerequisite: None. This course introduces the science of metrology in machining, focusing on the measurement and inspection of parts to ensure they meet required specifications and tolerances. Students will learn to use precision measuring instruments such as calipers, micrometers, height gauges, and CMM arms to verify part dimensions, surface finishes, and alignment. Emphasis is placed on the importance of accurate measurements in achieving high-quality, functional machined parts and maintaining consistency in production.

MACH 111 Introduction to CNC Machining
Credit Hours: 4
Prerequisite: None. Provides hands-on, safety-driven instruction in the operation of both CNC Turning and Machining Centers. Students will learn how to operate the controls of CNC machines, set up tools in both the lathe and mill, and create parts using already completed programs. They will also learn how to measure parts to ensure accuracy and precision in their machining processes, as well as how to offset tools properly to create quality parts. Additional skills include making minor program changes at the control, understanding machine positioning, and understanding G and M codes. (1 lecture, 3 lab)

MACH 117 Introduction to CNC Programming
Credit Hours: 4
Prerequisite: MACH 111 with a grade of C or higher. Builds on previously learned CNC operations skills and covers basic G and M code programming for CNC Turning and Machining Centers. Students will learn how to write basic CNC Lathe and Mill programs by hand. On the lathe, they will learn how to program profiles, grooves, and threads using canned cycles. On the mills, they will learn to program facing, milling profiles, pocketing cycles, and creating hole-making canned cycles. (1 lecture, 3 lab)

MACH 118 Intermediate CNC Machining
Credit Hours: 4
Prerequisite: MACH 117 with a grade of C or higher. Prerequisite / Corequisite: MACH 134. This course builds on the foundational machine operation and programming principles previously learned, advancing students' skills in precision manufacturing. Students will use CAD/CAM software to write their programs and work with multiple setups to create manufactured assemblies with tighter tolerances that must move and function properly. Emphasis is placed on enhancing efficiency, accuracy, and the ability to produce complex, high-quality components for real-world applications. (1 lecture, 3 lab)

MACH 119 Advanced CNC Machining
Credit Hours: 4
Prerequisite: MACH 118 with a grade of C or higher. In this advanced course, students will learn to safely operate and program both CNC lathes and mills while utilizing CAD/CAM software to design and create part models, fixturing, and G-code programs. Students will gain the skills to reverse engineer parts as well as design and create their own components, including 3D models, fixturing, and G-code programs. Additional focus will be on precision measurement, material identification, importing and exporting programs, and the safe setup and operation of CNC machines. Emphasis will also be placed on advanced tooling techniques for complex manufacturing applications. (1 lecture, 3 lab)

MACH 134 Computer Aided Manufacturing
Credit Hours: 4
Prerequisite: MACH 117 with a grade of C or higher. This course focuses on integrating engineering design with advanced machining processes, helping students build proficiency in both computer-based modeling and CNC machining techniques. Students will develop skills in creating and modifying 3D models, generating and editing CNC G-code, and importing and exporting program files. By combining modeling and CNC programming, students will transform 3D model files into fully functional CNC programs, relying exclusively on output-generated code. This hands-on experience prepares students for real-world manufacturing challenges. (1 lecture, 3 lab)

MACH 135 Advanced Computer Aided Manufacturing
Credit Hours: 4
Prerequisite: MACH 134 with a grade of C or higher. This course combines engineering design and machining processes, advancing beyond the fundamentals into operations such as 3D milling, 4th, and 5th-axis machining, as well as 4-axis lathe operations. Students must be proficient with both computers and machining. They will develop skills in creating and modifying 3D models and generating and editing CNC G-code. By integrating modeling and CNC programming, students will transform 3D model files into fully functional CNC programs using output-generated code. Additionally, students will build on previously acquired skills, including importing and exporting programs, safe setup and operation of CNC machines, setting work and tool offsets, identifying tools, and understanding G and M codes. (1 lecture, 3 lab)

MACH 175 Machine Tool Internship
Credit Hours: 1 to 8
Prerequisite: Consent of program coordinator. Provides opportunity to work with a skilled machinist to better understand skills and knowledge needed and to determine how the student likes actual machine tool work.

MACH 180 Problems in Machine Tool
Credit Hours: 1 to 3
Prerequisite: Consent of program coordinator. Independent study of a special problem in machine tool technology under the supervision of a machine tool instructor.

MATHEMATICS (MATH)

MATH 061 Pre-Algebra
Credit Hours: 3
Prerequisite: Equivalent placement score. Course is designed to review basic math skills in preparation for one of the following courses: MATH 101, MATH 107, MATH 110, or the Co-Requisite course combination of MATH 111/113, MATH 111/117, MATH 111/119. This course does not apply toward a degree or certificate. Students must earn a C or higher in the course (70% +) to advance to the next math class. This is a developmental course designed to help students prepare for college level mathematics. The course covers arithmetic operations for rational numbers (integers and fractions), and applying: ratios/rates, proportions, percentages, and perimeter/area. In addition, students will simplify numeric and algebraic expressions, solve algebraic equations, graph linear equations, write numbers in scientific notation, and perform measurement conversions.

MATH 101 Business Math
Credit Hours: 3
Prerequisite: MATH 061 with a grade of C or higher or equivalent placement score. Practical approach to understanding the application of mathematics within the business environment. Emphasis is placed on developing mathematical solutions to problems in the areas of marketing, accounting, finance, and banking.

MATH 102 Review of Essential Mathematics—A
Credit Hours: 2
Prerequisite: MATH 061 with a grade of C or higher or equivalent placement scores. Corequisite: MATH 113. This co-requisite course is designed to review essential mathematical concepts and techniques while providing structured support through practice and review. This course is for students who place just below MATH 113 and must be taken with MATH 113. Example topics may include rational and exponential expressions, solving quadratic equations, and graphical representations. In order to provide customized support for each group of students, topics will vary from class to class.

MATH 104 Review of Essential Mathematics—B
Credit Hours: 2
Prerequisite: MATH 061 with a grade of C or higher or equivalent placement score. Corequisite: MATH 119. This co-requisite course is designed to review essential mathematical concepts and techniques while providing structured support through practice and review. This course is for students who place just below MATH 119 and must be taken with MATH 119. Example topics may include significant digits, graphical representations, use of Excel, and inequalities. In order to provide customized support for each group of students, topics will vary from class to class.

MATH 110 Intermediate Algebra with Review
Credit Hours: 5
Prerequisite: MATH 061 with a grade of C or higher or equivalent placement score. This course is designed to include review of some essential mathematical concepts while providing structured support through practice and review. Topics include linear equations, in equalities, and their graphs, systems of equations in two unknowns, absolute value equations, rules of exponents, polynomials, rational expressions and equations, rational exponents, radicals and their equations, complex numbers, and solving quadratic equations using various techniques.

MATH 112 Intermediate Algebra
Credit Hours: 3
Prerequisite: Equivalent placement score. Topics include linear equations, inequalities, and their graphs, systems of equations in two unknowns, absolute value equations, rational expressions and equations, rational exponents, radicals and their equations, complex numbers, and solving quadratic equations using various techniques.

MATH 113 Mathematical Reasoning and Modeling
Credit Hours: 3
MOTR Equivalent: MOTR MATH 120 – Mathematical Reasoning & Modeling
Prerequisite: MATH 102, MATH 110, or MATH 112 with a grade of C or higher or equivalent placement score, or MATH 061 when taken with corequisite course, or equivalent placement score. Corequisite: MATH 102. Provides humanities students with a comprehensive overview of the skills required to navigate the mathematical demands of modern life and a deeper understanding of mathematical information. Students will develop critical thinking and problem-solving skills in order to draw

conclusions, make decisions, and communicate effectively in mathematical situations that depend upon multiple factors.

MATH 114 Precalculus Algebra
Credit Hours: 3
MOTR Equivalent: MOTR MATH 130 – Pre-Calculus Algebra
Prerequisite: MATH 110 or MATH 112 with a grade of C or higher or equivalent placement score. This course prepares students for fields of study that require a high level of algebraic reasoning or calculus. Topics include the foundational principles of functions, the analysis of functions, and algebraic reasoning. Students will study the following functions: linear, quadratic, exponential, logarithmic, rational, piecewise, and absolute value.

MATH 119 Statistical Reasoning
Credit Hours: 3
MOTR Equivalent: MOTR MATH 110 – Statistical Reasoning
Prerequisite: MATH 104, MATH 110 or MATH 112 with a grade of C or higher, or MATH 061 when taken with corequisite course, or equivalent placement score. Corequisite: MATH 104. This is a first course in statistics for students, such as social science majors, whose college and career paths require knowledge of the fundamentals of the collection, analysis and interpretation of data. Topics include interpretation of univariate and bivariate data using graphical and numerical methods, probability, discrete and continuous probability distributions, linear regression, an understanding of good practice in study design, statistical inference, confidence intervals, and hypothesis testing. Data-collection methods, statistical thinking and techniques, simulation, and the use of technology will support decisions and conclusions.

MATH 120 Precalculus Trigonometry
Credit Hours: 3
Prerequisite: MATH 114 or equivalent placement score. Corequisite: MATH 114. This course prepares students for the fields of science, technology, engineering, or mathematics as well as other fields that require a high level of algebraic reasoning or would require calculus. Topics include radius vector, right triangle and unit circle definitions of trigonometric functions, trig identities, graphs, inverse trig functions, trig equations, De Moivre's Theorem, and conics.

MATH 127 Business Statistics
Credit Hours: 3
Prerequisites: CAPP 125 and MATH 114 with grades of C or higher or equivalent placement score. Emphasizes data analysis, data production and statistical inference. Topics include descriptive statistics, probability, normal distributions, sampling, the central limit theorem, confidence intervals, and hypothesis testing. Correlation and regression will be discussed time permitting.

MATH 180 Problems in Math
Credit Hours: 1 to 3
Prerequisite: Consent of instructor. Independent study of a special problem in mathematics under the supervision of a mathematics instructor.

MATH 210 Calculus and Analytic Geometry I
Credit Hours: 5
Prerequisites: MATH 114 and MATH 120 with grades of C or higher or equivalent placement score. Topics include limits, continuity, derivatives, integrals of algebraic and transcendental functions, and appropriate applications.

MATH 211 Calculus and Analytic Geometry II
Credit Hours: 5
Prerequisite: MATH 210 with a grade of C or higher. Topics include parametric and polar coordinates, methods of integration, series, conic sections, and the application of these topics.

MATH 212 Calculus and Analytic Geometry III
Credit Hours: 5
Prerequisite: MATH 211 with a grade of C or higher. Topics include parametric equations of lines and curves in space; vectors and calculus of vector functions; multivariable, differential, and integral calculus; introduction to vector analysis; and application of these topics.

MATH 250 Differential Equations
Credit Hours: 3
Prerequisite: MATH 212 with a grade of C or higher. Course presents linear differential equations with application, series solutions, and Laplace transforms.

MEDICAL ASSISTING (MEA)

MEA 101 Introduction to Medical Assisting
Credit Hours: 3
Prerequisite: Acceptance to the Medical Assisting program. Establishes foundational concepts for the medical assistant including roles, communication, professionalism, legal and ethical issues, end of life concepts, stages of grief, working in interdisciplinary teams and safety issues. To successfully complete the course, the student must achieve 100 % of course designated MAERB core competencies and a grade of B or higher.

MEA 103 Exploration of the Human Body
Credit Hours: 3
Prerequisite: Acceptance to the Medical Assisting program. This course is designed to provide students with a basic understanding and application of the anatomical and physiological principles of the human body. It serves as a fundamental exploration of the intricate organization and operation of all human body systems, offering insight into how various systems work together to sustain life and maintain homeostasis. This course combines theoretical knowledge with practical applications, allowing students to gain a deep appreciation of the functionality of the human body and its relevance to health sciences and medicine. Students will develop a foundation for further studies in biology and related fields. Students must pass this course with a C or higher.

MEA 108 Medical Assisting Administrative Procedures
Credit Hours: 3
Prerequisite: Acceptance to the Medical Assisting program. This course is part of the MEA program. Students abide by the admission requirements for the program. Course includes records management, financial practices, insurance and coding, scheduling, office environment, and communication. Furthermore, students will achieve 100 percent of designated MAERB core competencies in the course. Students must maintain a B or higher to successfully pass the class.

MEA 109 Pharmacology Basics
Credit Hours: 3
Prerequisite: Acceptance to the Medical Assisting program. Foundational basics in pharmacology are presented in areas of drug pharmacokinetics, drug actions, drug names, drug forms, reference information, classifications, indications, and terminology. Parts of a prescription, abbreviations, scheduled substances, and over-the-counter medications are discussed. This course also provides knowledge in e-prescribing and prescription protocols. Drug legislation, the ambulatory care setting, and the 50 top drugs from different body systems are also covered.

MEA 110 Medical Scribe
Credit Hours: 2
Prerequisite: Must be a credentialed medical assistant, have completed the Medical Assistant Skills Certificate, or currently enrolled and in good standing in a medical assisting program from an accredited college with the consent of SFCC MEA program coordinator. The student is strongly encouraged to have prior keyboarding and effective typing skills. This course addresses the roles and responsibilities of a medical scribe. Students will be expected to type dictated information. Students discover how to ask pertinent questions, correct use of anatomy and medical terminology, enter diagnostic orders, basics of medical coding, and build relationships with healthcare providers. Students must maintain a C or higher to successfully pass the class.

MEA 112 Medical Assisting Clinical Procedures
Credit Hours: 3
Prerequisite: Acceptance to the Medical Assisting program. This course is part of the MEA program. Students abide by the admission requirements for the program. Course includes infection control, patient screening, general/physical examination, specialty examination, procedure/minor surgery, medication administration, office emergencies, patient education, alternative health care/community resources, communication strategies, and adaptations. Furthermore, students will achieve 100 percent of designated MAERB core competencies in the course. Students must maintain a B or higher to successfully pass the class.

MEA 114 Medical Assisting Advanced Skills
Credit Hours: 4
Prerequisite: Acceptance to the Medical Assisting program. Course uses advanced concepts for a more in-depth experience in clinical, laboratory and administrative procedures. This course examines pathophysiology, patient care coordination and education, transition of care, complex billing, allergy testing, specialty examination, sterile field procedures/minor surgery, and phlebotomy. The students complete the course by taking NHA's Certified Phlebotomy Technician (CPT) credentialing exam. Students may need additional time to meet the required number of successful phlebotomy blood draws. Students must maintain a B or higher to successfully pass this class. In addition to the overall grade, students must achieve 100% of the MAERB.

MEA 116 Medical Assisting Laboratory Procedures
Credit Hours: 3
Prerequisite: Acceptance to the Medical Assisting program. Course uses advanced concepts for a more in-depth experience in clinical, laboratory and administrative procedures. This course examines pathophysiology, patient care coordination and education, transition of care, complex billing, allergy testing, specialty examination, sterile field procedures/minor surgery, CLIA waived laboratory tests. The students complete the course by taking NHA's Certified Phlebotomy Technician (CPT) credentialing exam. Students may need additional time to meet the required number of successful phlebotomy blood draws. Students must maintain a B or higher to successfully pass this class. In addition to the overall grade, students

must achieve 100% of the MAERB Core Curriculum pertinent to this course.

MEA 190 Medical Assisting Capstone
Credit Hours: 6
Prerequisites: MEA 108, MEA 112, MEA 114 and MEA 116 with grades of B or higher and MEA 110 with a grade of C or higher. This course is part of the MEA program. Students must have met the course progression and grade requirements. This course applies the concepts learned throughout the Medical Assistant program in the clinical setting. The student will complete a minimum of 160 hours in an ambulatory care outpatient setting applying the knowledge learned throughout the program. Students must maintain a B or higher to successfully pass the class.

MECHANICS (MECH)

MECH 101 Introduction to Shop Operations
Credit Hours: 4
Prerequisite: None. This course offers an in-depth examination of policies and procedures relevant to repair shop operations, equipping students for entry-level positions in the automotive repair industry. Key topics covered include: customer communication, familiarization with basic hand and measuring tools, as well as safe lifting and jacking practices, service information utilization, chemical safety, parts ordering, tire repair, basic welding, work order completion, and maintenance procedures. By the conclusion of the course, students will possess the foundational skills and knowledge necessary to thrive as competent and effective employees in a repair shop environment. (0.5 Lecture, 3.5 Lab)

MECH 102 Electrical Fundamentals for Mechanics
Credit Hours: 3
Prerequisite: None: This course offers a comprehensive introduction to the principles of electrical systems in vehicles, agricultural equipment, and diesel. Students will gain essential knowledge and hands-on skills in the following areas: digital multimeter proficiency, wiring schematics and symbols, basic troubleshooting techniques, wire repair, Ohm's law, circuit types, and theory and operation of starting, charging, and battery systems. The course culminates in a project where students will apply their knowledge by constructing a graded circuit and creating a corresponding wiring schematic. This hands-on experience will reinforce theoretical concepts and prepare students for real-world applications in the field of electrical systems. (0.5 Lecture, 2.5 Lab)

MECH 103 Mobile Heating and Air Conditioning
Credit Hours: 4
Prerequisite: None. This course provides a thorough exploration of the theory and operation of mobile air conditioning systems. Students will learn to diagnose these systems and utilize the necessary tools for effective service and maintenance. Key topics include: charging and recovery procedures, compressor types, mobile A/C components, safety protocols, and 609 certification. By the end of the course, students will be equipped with the knowledge and skills required to proficiently service mobile air conditioning systems while adhering to industry standards and safety regulations. (0.5 Lecture, 3.5 Lab)

MECH 104 Engine Fundamentals
Credit Hours: 4
Prerequisite: None. This course provides students with a foundational understanding of internal combustion engine operation, construction, and basic maintenance. Topics include engine theory, major components, four-stroke and two-stroke cycles, fuel and air systems, lubrication, cooling systems, and basic diagnostic procedures. Designed to support Automotive Technology, Diesel Technology, and Agricultural Mechanics programs, this course equips students with essential skills needed to service and repair engines across a wide range of equipment and vehicles.
MECH 105 Alternative Fuels
Credit Hours: 3
Prerequisite: None. This course provides students with an understanding of how alternative fuels power engines in automotive, diesel, and agricultural machinery. The course explores how engines are adapted to run on biofuels, natural gas, electricity, hydrogen, and other alternative energy sources. Students will learn about the modifications required for fuel systems, ignition systems, and engine performance when using these fuels. Through hands-on labs and demonstrations, students will gain practical experience in troubleshooting and maintaining engines that run on alternative fuels, preparing them for the evolving demands of the transportation and agricultural industries.

MEDICAL LABORATORY TECHNICIAN (MLT)

MLT 150 Introduction to Lab Science Methods
Credit Hours: 2
Prerequisite: Acceptance to the Medical Laboratory Technician program. Course orients the student to the concepts in the laboratory environment including safe specimen handling, testing procedures, reporting results, basic quality control, laboratory organization, and professionalism.

MLT 210 Immunology
Credit Hours: 3
Prerequisite: Acceptance to the Medical Laboratory Technician program. Course consists of the principles and theories of antigen and antibody reactions and the immune system as related to diagnostic serologic procedures. (3 lab)

MLT 220 Clinical Chemistry and Urinalysis
Credit Hours: 5
Prerequisite: Acceptance to the Medical Laboratory Technician program. Course introduces the student to methods of analysis of chemical components found in the human body, the testing methodologies for those constituents and the results as applied to normal and abnormal disease states. (5 lab)

MLT 250 Hematology and Coagulation
Credit Hours: 5
Prerequisite: Acceptance to the Medical Laboratory Technician program. Course studies the cellular structures in blood, normal and abnormal cell development, alterations present in disease and the mechanisms of coagulation. (5 lab)

MLT 260 Phlebotomy
Credit Hours: 2
Prerequisite: Acceptance to the Medical Laboratory Technician program. Course covers various procedures in performing venipuncture and other specialized collection techniques in addition to laws and regulations for safe phlebotomy practices. (2 lab)

MLT 270 Immunohematology
Credit Hours: 5
Prerequisite: Acceptance to the Medical Laboratory Technician program. Course consists of concepts, applications and discrepancies of blood group testing, screening and crossmatch procedures and identifying unexpected antibodies. (5 lab)

MLT 280 Clinical Microbiology
Credit Hours: 4
Prerequisite: Acceptance to the Medical Laboratory Technician program. Course consists of the role of pathogenic bacteria and other microorganisms that includes bacterial culturing, differentiation and identification of human normal flora and disease-causing microorganisms. (4 lab)

MLT 290 Parasitology, Mycology and Virology
Credit Hours: 1
Prerequisite: Acceptance to the Medical Laboratory Technician program. Course introduces the student to parasites, fungus and viruses and their role in human health and disease.

MLT 291 Hematology and Coagulation Practicum
Credit Hours: 2
Prerequisite: Acceptance to the Medical Laboratory Technician program. Supervised clinical practice coordinated by the consortium in the hematology lab of selected clinical affiliates.

MLT 292 Clinical Chemistry Practicum
Credit Hours: 2
Prerequisite: Acceptance to the Medical Laboratory Technician program. Supervised clinical practice coordinated by the consortium in the clinical chemistry lab of selected clinical affiliates.

MLT 293 Clinical Microbiology Practicum
Credit Hours: 2
Prerequisite: Acceptance to the Medical Laboratory Technician program. Supervised clinical practice coordinated by the consortium in the microbiology lab of selected clinical affiliates.

MLT 294 Clinical Immunohematology Practicum
Credit Hours: 2
Prerequisite: Acceptance to the Medical Laboratory Technician program. Supervised clinical practice coordinated by the consortium in the immunohematology lab of selected clinical affiliates.

MUSIC (MUS)

MUS 100 Music Theory I
Credit Hours: 3
MOTR Equivalent: MOTR MUSC 101 – Music Fundamentals
"Prerequisite: MUS 100B or music theory placement test. +Corequisites: MUS 100B and MUS 105. Introduction to musical elements of notation, scales, key signatures, rhythms, melodies and harmonies, and their application within the context of music theory. Students must possess at least a basic understanding of music notation (names of notes, note values, etc.) when enrolling in this course as demonstrated by a grade of C or higher on the music theory placement test given on the first day of class. Those students not earning a C or higher will be concurrently enrolled in MUS 100B for the semester in order to strengthen foundation skills and continue as a music major.

MUS 100B Fundamentals of Music Theory
Credit Hours: 2
Prerequisite: None. For students interested in enhancing their musicianship, exploring how music works, preparing for more serious collegiate study of music theory, or strengthening their fundamental music theory skills.

MUS 101 Music Appreciation
Credit Hours 3
MOTR Equivalent: MOTR MUSC 100 – Music Appreciation
Prerequisite: None. Overview providing knowledge of the basic elements of music, the important musical masterpieces of various eras and the significant composers in musical history. A portion of the course time is devoted to listening to recordings and viewing supporting video footage of selected composers and performers. Students enrolled in this course must be able to independently attend two live concerts at some point in the course.

MUS 102 History of Rock Music
Credit Hours: 3
MOTR Equivalent: MOTR MUSC 100RP – Music Appreciation – Rock/Pop
Prerequisite: None. Analyses by decade of the many styles of modern music that have fallen under the descriptive term of rock and roll resulting in an understanding of rock music's importance as a cultural, generational and historical force in the 20th century. Focus will be given to key performing artists, groups and music trends in each decade from 1950 to the present. Lecture and discussion will also include the role that gender, race and socio-political events played in the music of the second half of the 20th century.

MUS 103 Music History and Literature Before 1800
Credit Hours: 3
MOTR Equivalent: MOTR MUSC 103– Music History
Prerequisite: None. Survey of music history and literature from its beginnings through the Baroque era as well as the role of music in the historical fabric of each era. Instrumental and vocal/choral genres and major composers will be studied. A significant portion of course time will be devoted to listening to recordings of appropriate music, composers and performers.

MUS 104 Music History and Literature Since 1800
Credit Hours: 3
MOTR Equivalent: MOTR MUSC 104 – Music History II
Prerequisite: None. Survey of music history and literature from the Classical era to the present as well as the role of music in the historical fabric of each era. Instrumental and vocal/choral genres and major composers will be covered. A significant portion of course time will be devoted to listening to recordings of appropriate music, composers and performers

MUS 105 Aural Training I
Credit Hours: 1
Prerequisite: None. Corequisite: MUS 100. Introduction to musical elements of notation, scales, key signatures, rhythms, melodies, and harmonies, and their application within the context of music theory. Students must possess at least a basic understanding of music notation (names of notes, note values, etc.) when enrolling in this course as demonstrated by a grade of C or higher on the music theory placement exam given on the first day of class. Those students not earning a C or higher will be concurrently enrolled in MUS 100B for the semester in order to strengthen foundation skills and continue as a music major.

MUS 106 Music Theory II
Credit Hours: 3
Prerequisite: MUS 100. Corequisite: MUS 109. Continuation of MUS 100, developing theoretical competency in music notation, rhythm and meter, scales, intervals, triads, and melodic and harmonic analysis.

MUS 107 Music Theory III
Credit Hours: 3
Prerequisite: MUS 106. Corequisite: MUS 110. Continuation of MUS 106 resulting in the application of more advanced theory concepts including the use of primary and secondary triads and seventh chords, the introduction of altered chords, modulations, and the use of cadential figures.

MUS 108 Music Theory IV
Credit Hours: 3
Prerequisite: MUS 107. Corequisite: MUS 111. Continuation of MUS 107 that will introduce advanced theory topics such as the use of modality and counterpoint in music as well as late 19th century harmonic functions and early 20th century compositional techniques. This is the terminal theory course for all music majors.

MUS 109 Aural Training II
Credit Hours: 1
Prerequisite: MUS 105. Corequisite: MUS 106. Provides practical application of the skills being learned in MUS 106 through sight singing, solfege and rhythmic, melodic and harmonic dictation. Enhances and supports confidence in music composition and performance through the aural process.

MUS 110 Aural Training III
Credit Hours: 1
Prerequisite: MUS 109. Corequisite: MUS 107. Provides practical application of the skills learned in MUS 107 through more advanced sight singing, solfege and rhythmic, melodic and harmonic dictation experiences. Enhances and supports confidence in writing and performing music through the aural process.

MUS 111 Aural Training IV
Credit Hours: 1
Prerequisite: MUS 110. Corequisite: MUS 108. Provides practical application of the skills learned in MUS 108 through advanced sight singing, solfege and rhythmic, melodic and harmonic dictation experiences. Enhances and supports confidence in writing and performing music through the aural process. This is the terminal aural training course for all music majors.

MUS 119 Jazz Band I
Credit Hours: 1
MOTR Equivalent: MOTR PERF 102B – Music Performance – Band
Prerequisite: Consent of instructor. A select ensemble that performs band literature representing the various styles and genres of traditional and nontraditional jazz. Instruction will focus on skills required for successful performance (tone, articulation, breathing, balance, rhythm, etc.).

MUS 120 Jazz Band II
Credit Hours: 1
Prerequisites: MUS 119 and consent of instructor. A select ensemble that performs band literature representing the various styles and genres of traditional and nontraditional jazz. Second enrollment in Jazz Band will focus on advancing those skills required for successful performance (tone, articulation, breathing, balance, rhythm, etc.).

MUS 121 Jazz Band III
Credit Hours: 1
Prerequisites: MUS 120 and consent of instructor. A select ensemble that performs band literature representing the various styles and genres of traditional and nontraditional jazz. Third enrollment in Jazz Band will focus on advancing those skills required for successful performance (tone, articulation, breathing, balance, rhythm, etc.).

MUS 122 Jazz Band IV
Credit Hours: 1
Prerequisites: MUS 121 and consent of instructor. A select ensemble that performs band literature representing the various styles and genres of traditional and nontraditional jazz. Fourth enrollment in Jazz Band will focus on advancing those skills required for successful performance (tone, articulation, breathing, balance, rhythm, etc.).

MUS 123 Jazz Band V
Credit Hours: 1
Prerequisites: MUS 122 and consent of instructor. A select ensemble that performs band literature representing the various styles and genres of traditional and nontraditional jazz. Fifth enrollment in Jazz Band will focus on advancing those skills required for successful performance (tone, articulation, breathing, balance, rhythm, etc.).

MUS 124 Jazz Band VI
Credit Hours: 1
Prerequisites: MUS 123 and consent of instructor. A select ensemble that performs band literature representing the various styles and genres of traditional and nontraditional jazz. Sixth enrollment in Jazz Band will focus on advancing those skills required for successful performance (tone, articulation, breathing, balance, rhythm, etc.).

MUS 136 Applied Instrumental Lessons I
Credit Hours: 1 to 2
Prerequisite: None. Performance-oriented study of the technique and literature associated with a specific musical instrument through weekly private lessons and student independent study. Performance on one recital and final jury required.

MUS 137 Applied Instrumental Lessons II
Credit Hours: 1 to 2
Prerequisite: MUS 136. Performance-oriented study of the technique and literature associated with a specific musical instrument through weekly private lessons and student independent study. Performance on one recital and final jury required.

MUS 138 Applied Instrumental Lessons III
Credit Hours: 1 to 2
Prerequisite: MUS 137. Performance-oriented study of the technique and literature associated with a specific musical instrument through weekly private lessons and student independent study. Performance on one recital and final jury required.

MUS 139 Applied Instrumental Lessons IV
Credit Hours: 1 to 2
Prerequisite: MUS 138. Performance-oriented study of the technique and literature associated with a specific musical instrument through weekly private lessons and student independent study. Performance on one recital and final jury required.

MUS 139B Applied Instrumental Lessons V
Credit Hours: 1 to 2
Prerequisite: MUS 139. Performance-oriented study of the technique and literature associated with a specific musical instrument through weekly private lessons and student independent study. Performance on one recital and final jury required.

MUS 139C Applied Instrumental Lessons VI
Credit Hours: 1 to 2
Prerequisite: MUS 139B. Performance-oriented study of the technique and literature associated with a specific musical instrument through weekly private lessons and student independent study. Performance on one recital and final jury required.

MUS 140 Guitar Class I
Credit Hours: 2
Prerequisite: None. Practical study of the guitar designed for beginning students with less than one year of experience.

MUS 141 Guitar Class II
Credit Hours: 2
Prerequisite: MUS 140 or consent of instructor. Continuation of those skills learned in MUS 140 leading to more advanced guitar performance skills. Designed to allow the student to continue studying guitar beyond MUS 140.

MUS 145 Piano Class I
Credit Hours: 2
Prerequisite: None. Study of piano performance skills, especially for students with little or no previous training. Covers rudiments of music, hand positions, and performing hands separately and together; intervals, triads and scales are also covered. Required for music majors.

MUS 146 Piano Class II
Credit Hours: 2
Prerequisite: MUS 145. Continuation of the study of piano performance skills learned in MUS 145. Continued work performing hands separately and together, intervals, triads, simple harmony, and scales are covered. Required for music majors.

MUS 147 Piano Class III
Credit Hours: 2
Prerequisite: MUS 146. Continuation of the study of piano performance skills learned in MUS 146 with emphasis on specific skills necessary to pass the piano proficiency examination. Required for music majors.

MUS 148 Piano Class IV
Credit Hours: 2
Prerequisite: MUS 147. Continuation of the study of piano performance skills learned in MUS 147 with emphasis on specific skills necessary to pass the piano proficiency examination. Required for music majors.

MUS 150 Applied Piano Lessons I
Credit Hours: 1 to 2
Prerequisite: One year of a piano course. Private piano lessons. Intended only for serious piano students.

MUS 151 Applied Piano Lessons II
Credit Hours: 1 to 2
Prerequisite: MUS 150. Second enrollment in piano lessons. Private piano lessons. Intended only for serious piano students.

MUS 152 Applied Piano Lessons III
Credit Hours: 1 to 2
Prerequisite: MUS 151. Third enrollment in piano lessons. Private piano lessons. Intended only for serious piano students.

MUS 153 Applied Piano Lessons IV
Credit Hours: 1 to 2
Prerequisite: MUS 152. Fourth enrollment in Piano Lessons. Private piano lessons. Intended only for serious piano students.

MUS 155 Voice Class
Credit Hours: 2
Prerequisite: None. Study of vocal techniques and beginning vocal performance. Open to any interested students. Will include both group and individual singing.

MUS 160 Applied Voice Lessons I
Credit Hours: 1
Prerequisite: One year of a voice course. Performance-oriented study of voice through weekly private applied lesson and student independent study. Instruction will focus on individual vocal needs and strengths. Performance on one recital and final jury required.

MUS 161 Applied Voice Lessons II
Credit Hours: 1
Prerequisite: MUS 160. Performance-oriented study of voice through weekly private applied lessons and student independent study. Instruction will focus on individual vocal needs and strengths. Performance on one recital and final jury required.

MUS 162 Applied Voice Lessons III
Credit Hours: 1
Prerequisite: MUS 161. Performance-oriented study of voice through weekly private applied lessons and student independent study. Instruction will focus on individual vocal needs and strengths. Performance on one recital and final jury required.

MUS 163 Applied Voice Lessons IV
Credit Hours: 1
Prerequisite: MUS 162. Performance-oriented study of voice through weekly private applied lessons and student independent study. Instruction will focus on individual vocal needs and strengths. Performance on one recital and final jury required.

MUS 163B Applied Voice Lessons V
Credit Hours: 1
Prerequisite: MUS 163. Performance-oriented study of voice through weekly private applied lesson and student independent study. Instruction will focus on individual vocal needs and strengths. Performance on one recital and final jury required.

MUS 163C Applied Voice Lessons VI
Credit Hours: 1
Prerequisite: MUS 163B. Performance-oriented study of voice through weekly private applied lessons and student independent study. Instruction will focus on individual vocal needs and strengths. Performance on one recital and final jury required.

MUS 180 Problems in Music
Credit Hours: 1 to 3
Prerequisite: Consent of instructor. Independent study of a special problem in music under the supervision of a music instructor.

MUS 195 Concert and Recital Attendance
Credit Hours: 0
Prerequisite: None. Attendance of at least eight music concerts and/or recitals in a semester performed by college soloists and ensembles or community nonacademic performing groups such as professional or semi-professional ensembles, operas or university musicals. Community performances must be pre-approved by the Music Arts program coordinator prior to attending. This is a pass/fail course.

MUS 196 Concert Band I
Credit Hours: 1
MOTR Equivalent: MOTR PERF 102B – Music Performance - Band
Prerequisite: None. Study and performance of music written specifically for instrumental ensembles. Focuses on musical skills required for successful performance of literature from various musical genres.

MUS 197 Concert Band II
Credit Hours: 1
MOTR Equivalent: MOTR PERF 102B – Music Performance - Band
Prerequisite: MUS 196 and Consent of Instructor. Study and performance of music written specifically for instrumental music ensembles. Focuses on musical skills required for successful performance of literature from various musical genres.

MUS 198 Concert Band III
Credit Hours: 1
Prerequisites: MUS 197 and consent of instructor. Study and performance of music written specifically for instrumental music ensembles. Focuses on musical skills required for successful performance of literature from various musical genres.

MUS 199 Concert Band IV
Credit Hours: 1
Prerequisites: MUS 198 and consent of instructor. Study and performance of music written specifically for instrumental music ensembles. Focuses on musical skills required for successful performance of literature from various musical genres.

MUS 200 Concert Band V
Credit Hours: 1
Prerequisites: MUS 199 and consent of instructor. Study and performance of music written specifically for instrumental music ensembles. Focuses on musical skills required for successful performance of literature from various musical genres.

MUS 201 Concert Band VI
Credit Hours: 1
Prerequisites: MUS 200 and consent of instructor. Study and performance of music written specifically for instrumental music ensembles. Focuses on musical skills required for successful performance of literature from various musical genres.

MUS 202 Concert Band VII
Credit Hours: 1
Prerequisites: MUS 201 and consent of instructor. Study and performance of music written specifically for instrumental music ensembles. Focuses on musical skills required for successful performance of literature from various musical genres.

MUS 203 Concert Band VIII
Credit Hours: 1
Prerequisites: MUS 202 and consent of instructor. Study and performance of music written specifically for instrumental music ensembles. Focuses on musical skills required for successful performance of literature from various musical genres.

MUS 204A Chamber Singers I
Credit Hours: 1
MOTR Equivalent: MOTR PERF 102C – Music Performance – Choir
Prerequisites: Consent of instructor. Select choir of mixed voices that performs chamber music from all historical periods. Instruction will focus on ensemble skills necessary for successful performance (tone production, diction, blend, balance, phrasing, etc.).

MUS 205A Chamber Singers II
Credit Hours: 1
Prerequisites: MUS 204A and consent of instructor. Select choir of mixed voices that performs chamber music from all historical periods. Instruction will focus on ensemble skills necessary for successful performance (tone production, diction, blend, balance, phrasing, etc.).

MUS 206A Chamber Singers III
Credit Hours: 1
Prerequisites: MUS 205A and consent of instructor. Select choir of mixed voices that performs chamber music from all historical periods. Instruction will focus on ensemble skills necessary for successful performance (tone production, diction, blend, balance, phrasing, etc.).

MUS 207A Chamber Singers IV
Credit Hours: 1
Prerequisites: MUS 206A and consent of instructor. Select choir of mixed voices that performs chamber music from all historical periods. Instruction will focus on ensemble skills necessary for successful performance (tone production, diction, blend, balance, phrasing, etc.).

MUS 208A Chamber Singers V
Credit Hours: 1
Prerequisites: MUS 207A and consent of instructor. Select choir of mixed voices that performs chamber music from all historical periods. Instruction will focus on ensemble skills necessary for successful performance (tone production, diction, blend, balance, phrasing, etc.).

MUS 209A Chamber Singers VI
Credit Hours: 1
Prerequisites: MUS 208A and consent of instructor. Select choir of mixed voices that performs chamber music from all historical periods. Instruction will focus on ensemble skills necessary for successful performance (tone production, diction, blend, balance, phrasing, etc.).

MUS 210A Contemporary Choir I
Credit Hours: 1
MOTR Equivalent: MOTR PERF 102C - Music Performance – Choir
Prerequisite: Consent of instructor. Select choir of mixed voices that performs a wide range of vocal styles. Instruction focuses on vocal skills for those varying styles of music.

MUS 211A Contemporary Choir II
Credit Hours: 1
Prerequisites: MUS 210A and consent of instructor. Select choir of mixed voices that performs a wide range of vocal styles. Instruction focuses on vocal skills for those varying styles of music.

MUS 212A Contemporary Choir III
Credit Hours: 1
Prerequisites: MUS 211A and consent of instructor. Select choir of mixed voices that performs a wide range of vocal styles. Instruction focuses on vocal skills for those varying styles of music.

MUS 213A Contemporary Choir IV
Credit Hours: 1
Prerequisites: MUS 212A and consent of instructor. Select choir of mixed voices that performs a wide range of vocal styles. Instruction focuses on vocal skills for those varying styles of music.

MUS 214A Contemporary Choir V
Credit Hours: 1
Prerequisites: MUS 213A and consent of instructor. Select choir of mixed voices that performs a wide range of vocal styles. Instruction focuses on vocal skills for those varying styles of music.

MUS 215A Contemporary Choir VI
Credit Hours: 1
Prerequisites: MUS 214A and consent of instructor. Select choir of mixed voices that performs a wide range of vocal styles. Instruction focuses on vocal skills for those varying styles of music.

NETWORKING (NET)

NET 101 Introduction to Networks
Credit Hours: 3
Prerequisite: None. Introduces the architecture, structure, functions, components, and models of the internet and computer networks. The principles of Internet Protocol (IP) addressing, fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of the course, students will be able to build simple local area networks (LANs), perform basic configurations for routers and switches and implement IP addressing schemes.

NET 102 Networking Essentials
Credit Hours: 3
Prerequisite: None. Introduces the student to the use and implementation of local area networks and basic network design concepts. Subject matter covered during this course all align with current Network+ certification topics and help prepare a student for this certification.

NET 103 Routing and Switching Essentials
Credit Hours: 3
Prerequisite: NET 101 with a grade of C or higher. Describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPv2, single-area and multi-area open shortest path first (OSPF), virtual LANs, and inter-virtual LAN routing in both IPv4 and IPv6 networks.

NET 106 Introduction to Network Security
Credit Hours: 3
Prerequisite: None. Corequisite: NET 101. Course will introduce students to a basic understanding of computer, network and organizational security as it relates to the information technology field.

NET 120 Network Server
Credit Hours: 3
Prerequisite: None. Corequisite: NET 101. Course will cover the current popular server operating system. Topics include planning a network, installing hardware and software, management, client accounts, and troubleshooting. Course will be structured to the requirements for certification.

NET 126 Network Client
Credit Hours: 3
Prerequisite: None. Corequisite: NET 101. Study of the operating system used on today's workstations. Installation, administration, configuring files, security, and local and network printing will be presented from a network administrator's viewpoint. Troubleshooting and networking the operating system will be included.

NET 135 SQL Server System Administration
Credit Hours: 3
Prerequisite: NET 120 with a grade of C or higher. Course covers how to install, configure and administrate a structured query language (SQL) server. Topics include configuring database options (capacity, connectivity and performance); automating data transfer and manipulation with data transformation services (DTS) packages; using SQL server replication services; managing security (authentication, logins, permissions, and alerts); monitoring and fine-tuning system performance; performing backups and restorations; clustering databases; supporting SQL server in a clustered environment; implementing disaster recovery; and optimizing clustering performance.

NET 136 Exchange Server Administration
Credit Hours: 3
Prerequisite: NET 120 with a grade of C or higher. Study of installing, configuring and administering Microsoft Exchange Server. Configure Microsoft Directory Services, administer groups and public folder solutions for Exchange Server. Deployment of mail clients such as Outlook and Outlook Web Access, as well as configuring recipient objects for email, instant messaging and chat. Learn to troubleshoot messaging connectivity and how to resolve problems with clients, routing, foreign mail systems, and links between servers. Additional topics include enhanced Exchange Server Security using v3 certificates, virtual servers, and Microsoft Key Management Server; optimizing messaging, collaboration and calendaring services; managing the Microsoft Web Storage System; and developing a backup and recovery plan for system and user data.

NET 138 Network Directory Services
Credit Hours: 3
Prerequisite: NET 120 with a grade of C or higher. Study of the planning, configuring and administering of network directory services and infrastructure on a LAN. Topics include the installation and configuration of domain name

system (DNS); the administration of the network users' environment and software using group policies; remote installation services (RIS); management of users, groups, shared folders, and network resources; implementing network security and security troubleshooting; and monitoring and optimizing the directory services.

NET 140 PC Hardware
Credit Hours: 3
Prerequisite: None. Presents microcomputer architecture, input/output (I/O) and systems operation. Other topics include peripherals, diagnostics, drives, memory, and maintenance procedures. Laboratory consists of troubleshooting selected computer systems.

NET 142 PC Operating Systems
Credit Hours: 3
Prerequisite: None. Study of computer operating systems including Windows, Linux and DOS, with requirements of necessary hardware and known problems and features. Laboratory consists of installation, maintenance and repair of operating systems.

NET 158 Network Firewalls
Credit Hours: 3
Prerequisites: NET 101 and NET 106 with grades of C or higher. Course will cover the functions, features and configuration of a firewall as applied in a network. Covers setup, management, traffic filtering, and virtual private networks (VPNs). Students will configure and implement firewalls to protect the network from external threats. Hands on coursework is included in the course.

NET 175 Network Administration Internship
Credit Hours: 3
Prerequisite: Program Coordinator Approval. Designed for practical application in the operations of a network. Provides on-the-job training and work experience in the area of computer networks. Students will be supervised and evaluated by the instructor.

NET 180 Networking Project
Credit Hours: 1 to 3
Prerequisite: Consent of program coordinator. Independent study of a special problem in networking under the supervision of a networking instructor.

NET 202 Digital Forensics
Credit Hours: 3
Prerequisites: NET 101 and NET 106 with grades of C or higher. Course will introduce students to the basics concepts and skills used when investigating possible computer crimes. Such skills could be beneficial in a variety of roles, i.e., working with law enforcement, private contractors, etc.

NET 203 Enterprise Networks, Security, and Automation
Credit Hours: 3
Prerequisite: NET 103 with a grade of C or higher. Discusses the wide area network (WAN) technologies and network services required by converged applications in a complex network. The course enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. Students also develop the knowledge and skills needed to implement internet protocol security (IPsec) and virtual private network (VPN) operations in a complex network.

NET 206 Ethical Hacking
Credit Hours: 3
Prerequisites: NET 101 and NET 106 with grades of C or higher. Course will introduce students to the basics of scanning, testing, hacking, and securing resources. Expanding upon the basics of general security practices, students will gain a better understanding of how to better secure resources.

NET 210 Infrastructure Automation
Credit Hours: 3
Prerequisites: NET 101, NET 125, and CIS 120 with grades of C or higher. In this course students will develop software skills with Python, GIT, and common data formats such as XML, JSON, and YAML. Utilizing knowledge gained students will learn how to automate tasks related to networking and infrastructure management.

NET 220 Enterprise Linux
Credit Hours: 3
Prerequisites: NET 101 and NET 125 with grades of C or higher. Students will learn to work with Red Hat Enterprise Linux (RHEL) from a systems administration perspective. RHEL is the most commonly utilized Linux OS in the commercial environment. Understanding how to utilize the command line, work with files, as well as manage users and groups are just an introduction to the topics which will be covered.

NET 222 Cloud Infrastructure and Directory Services
Credit Hours: 3
Prerequisites: NET 120 and NET 138 with grades of C or higher. Course will introduce students to various server applications that are widely utilized throughout the information systems industry.

NET 223 Enterprise Applications II
Credit Hours: 3
Prerequisites: NET 101 and NET 120 with grades of C or higher. Course will introduce students to various server applications that are widely utilized throughout the information systems industry.

NET 225 Network Scripting and Automation
Credit Hours: 3
Prerequisite: NET 101 and NET 210 with grades of C or higher. This course introduces students to scripting and automation concepts essential for network administration. Students will develop practical skills in PowerShell and Bash scripting to automate administrative tasks, manage systems, and streamline network operations. Topics include script syntax, variables, control structures, functions, regular expressions, and automation of common administrative tasks in Windows and Linux environments.

NET 231 Mobile Networking
Credit Hours: 3
Prerequisites: NET 101 and NET 126 with grades of C or higher. This course will teach students the basics of configuration, supporting and managing mobile devices in the corporate network.

NET 238 Server Virtualization
Credit Hours: 3
Prerequisite: NET 120 with a grade of C or higher. Course will teach students in the setup, configuration and management of virtualized servers.

NET 240 Enterprise Storage
Credit Hours: 3
Prerequisite: NET 120 with a grade of C or higher. Course is designed to introduce students to technologies utilized for data storage in the enterprise environment.

NURSING (NURS)

NURS 102 CPR for Health Care Providers
Credit Hours: 0.5
Prerequisite: None. American Heart Association course teaches health care providers how to recognize and respond to life-threatening emergencies such as respiratory arrest, cardiac arrest and foreign-body obstruction in infants, children and adults. The skills necessary to respond to these emergencies are demonstrated and practiced during the course. Course includes use of an automated external defibrillator (AED). Upon successful completion the student will be issued an American Heart Association Cardiopulmonary Resuscitation (CPR) card for Health Care Providers. This is a pass/fail course.

NURS 103 CPR Recertification
Credit Hours: 0.25
Prerequisite: Consent of instructor. Course is required to maintain American Heart Association CPR certification in the health care field. A current American Heart Association CPR card for Health Care Provider is required to enroll in the course. This is a pass/fail course.

NURS 110 Personal Vocational Concepts
Credit Hours: 1
Prerequisite: Acceptance to Year One of the Nursing (PN) program. Exploration of the foundations of evidence-based nursing practice, with emphasis on the professional standards of care, role identification, and responsibilities. Students will examine key behavioral concepts, the history and evolution of nursing, and the importance of interprofessional collaboration. The course also addresses quality improvement processes, ethical and legal considerations, and moral decision-making in nursing practice.

NURS 112 Introduction to Psycho-Social Health
Credit Hours: 2
Prerequisite: Acceptance to Year One of the Nursing (PN) program. Basic concepts of wellness and illness, caring, communication techniques, and growth and development across the life cycle are introduced with an emphasis on evidence-based care. Special circumstances and interpersonal relationships, such as the impact of violence and abuse, cultural awareness, the grieving process and spiritual needs of the individual and family will be explored. Special treatment modalities such as medications will be discussed with regard to concepts of mental health.

NURS 114 Fundamentals I
Credit Hours: 2
Prerequisite: Acceptance to Year One of the Nursing (PN) program. Essential nursing skills utilizing current standards of practice required for entry- level nurses are introduced. The learner will demonstrate an understanding of how to assist clients with important daily activities and basic nursing assessment skills through both classroom and hands-on learning experiences. (1.5 lecture, 0.5 lab)

NURS 117 Fundamentals II
Credit Hours: 3
Prerequisite: Acceptance to Year One of the Nursing (PN) program. Presents more advanced essential nursing skills based upon current standards of practice that are required for entry-level nurses. The learner is introduced to the

nursing process that is utilized in the delivery of nursing care. Skills are presented through both classroom and hands-on learning experiences and includes development of nursing assessment skills, medication administration, intravenous (IV) therapy, use of information technology, and other technical skills. (2 lecture, 1 lab)

NURS 118 Fundamentals II Clinical
Credit Hours: 1.5
Prerequisite: Acceptance to Year One of the Nursing (PN) program. Essential nursing skills utilizing current standards of practice presented in NURS 114 and NURS 117 will be applied in both long term and acute care clinical settings. Skills that will be mastered include physical assessment, therapeutic communication, basic nursing care, and nursing documentation. This is a pass/fail course.

NURS 119 Allied Health Pharmacology I
Credit Hours: 3
Prerequisite: Acceptance to Year One of the Nursing (PN) program. Basic pharmacologic, pharmacodynamics and pharmacokinetic principles for the most common drug classifications and specific select drugs will be explored using evidence-based practices. Emphasis on patient safety needs are incorporated through individualized teaching related to the most common drug classifications.

NURS 122 Adult Health I
Credit Hours: 4
Prerequisite: Acceptance to Year One of the Nursing (PN) program. Entry-level, evidence-based nursing care will be discussed for adult and elderly clients experiencing alterations in the integumentary, respiratory and cardiac systems; clients undergoing surgery; and clients with cancer.

NURS 124 Adult Health II
Credit Hours: 4
Prerequisite: Acceptance to Year One of the Nursing (PN) program. The basic nursing course addresses evidence-based practice principles and nursing care of adult and elderly clients experiencing alterations in renal, neurological and gastrointestinal systems, as well as the client who has developed diabetes mellitus. Included are basic strategies for leadership and conflict resolution.

NURS 126 Adult Health Clinical
Credit Hours: 3
Prerequisite: Acceptance to Year One of the Nursing (PN) program. Basic nursing concepts utilizing current standards and evidence based best practices are applied to the acute clinical setting and clinical simulation. The student will provide culturally sensitive nursing care to the client and family with altered health status, while evaluating laboratory and diagnostic findings, dosage calculation, medication effectiveness, IV therapy, and client responses. This is a pass/fail course.

NURS 128 Adult Health III
Credit Hours: 2
Prerequisite: Acceptance to Year One of the Nursing (PN) program. Principles of evidence-based nursing care are addressed for adult and elderly clients experiencing alterations in the endocrine, sensory, musculoskeletal, hematological, and immune systems.

NURS 129 Allied Health Pharmacology II
Credit Hours: 3
Prerequisite: Acceptance to Year One of the Nursing (PN) program. Basic pharmacologic, pharmacodynamics, and pharmacokinetic principles for the most common drug classifications and specific select drugs will be explored using evidence-based practices. Emphasis on patient safety needs is incorporated through individualized teaching related to the most common drug classifications.

NURS 130 Adult Health Care Coordination Clinical
Credit Hours: 2
Prerequisite: Acceptance to Year One of the Nursing (PN) program. Focuses on the utilization and application of basic skills gained from the practical nursing curriculum and incorporates current standards and evidence-based practices for the role of an entry-level nurse. Emphasis is placed on principles of leadership, conflict resolution, coordinating client care, and applying basic principles across the lifespan, particularly the elderly client. This is a pass/fail course.

NURS 134 Nursing Care Childbearing Family
Credit Hours: 1.5
Prerequisite: Acceptance to Year One of the Nursing (PN) program. Foundational learning that focuses on health care and wellness promotion for uncomplicated clients (care conditions). Using evidence based practice the course addresses cultural diversity, health disparities, and standards of care during the reproductive years, including the laboring woman, postpartum patient/family, the newborn, and gynecological issues.

NURS 136 Childbearing Family Clinical
Credit Hours: 1.5
Prerequisite: Acceptance to Year One of the Nursing (PN) program. Foundational learning that focuses on women ‘s health and wellness promotion across the lifespan. In addition, the course explores evidenced-based and culturally sensitive care for the laboring woman,

postpartum patient/family and patients experiencing gynecological issues. This is a pass/fail course.

NURS 140 Nursing Care Child Rearing Family
Credit Hours: 2
Prerequisite: Acceptance to Year One of the Nursing (PN) program. Concepts of assessment, growth and development, nutrition for the pediatric patient, medication administration for children, common recurring health conditions, and evidence-based nursing care of the hospitalized child are discussed.

NURS 142 Child Rearing Family Clinical
Credit Hours: 1.5
Prerequisite: Acceptance to Year One of the Nursing (PN) program. Participation in activities to develop skills in family-centered nursing care of children is expected. Experiences will include health promotion activities in the community, providing evidence-based patient centered nursing care of ill children, and promoting interpersonal relationships within the family unit. This is a pass/fail course.

NURS 210 Nursing Transition Course
Credit Hours: 2
Prerequisite: Acceptance to Year Two of the Associate Degree Nursing (ADN) program. Building upon the knowledge obtained from the practical nursing curriculum, the advanced placement student reviews the philosophy, outcome-based curriculum and use of evidence-based practice. The student transitioning into the ADN program will have opportunities to demonstrate competencies in pharmacology (including dosage calculations), IV starts and maintenance, physical assessment, and more. The student will explore safe and effective care, health promotion, care of the older adult, and cultural awareness. Completion of the course with a B or better is required to continue in the ADN program. (1.5 lecture, 0.5 lab)

NURS 211 Paramedic Transition Course
Credit Hours: 4
Prerequisite: Acceptance to Year Two of the Associate Degree Nursing (ADN) program. Course is designed to build upon existing knowledge and skill obtained from a formal paramedic education program. Utilizing outcome-based curriculum, the advanced placement student learns to apply nursing knowledge, skills, and attitudes to provide high-quality, safe, and effective care. The student transitioning into the ADN program will have opportunities to demonstrate competency in the application of the nursing process, display expected professional behaviors, examine the dynamics of the healthcare team, and utilize nursing skills. This course will emphasize and explore the importance of evidence-based practice, cultural awareness, health promotion, and care considerations for clients across the lifespan. Completion of the course with a grade of B or higher is required to continue into the ADN program.

NURS 213 Introduction to Professional Nursing
Credit Hours: 2
Prerequisite: Acceptance to Year Two of the Associate Degree Nursing (ADN) program. Building upon the knowledge obtained from the practical nursing curriculum or paramedic transitions course, leadership and management concepts essential to professional nursing practice and strategies to manage professional stressors will be explored. Emphasis is placed on applying evidence-based practice, promoting patient-centered and culturally sensitive care, and the use of information technology to enhance communication and support decision-making. Ethical and legal aspects of nursing, quality improvement to ensure patient safety and quality of care, and inter-professional collaboration are integrated to prepare students for leadership roles in diverse healthcare settings.

NURS 215 Complex Health: Mental Health
Credit Hours: 2.5
Prerequisite: Acceptance to Year Two of the Associate Degree Nursing (ADN) program. Building upon the knowledge obtained from the previous curriculum, the nurse's role in promoting evidence based psychosocial integrity for the client and family/significant others are explored. Topics include the use of coping mechanisms, crisis intervention, therapeutic communication, psychopathology, case management, and health disparities. Emphasis is placed on cultural awareness, social determinants of health, client education, available resources, and current trends in providing care in the community setting to promote wellness.

NURS 216 Complex Health: Mental Health Clinical
Credit Hours: 1
Prerequisite: Prerequisite: Acceptance to Year Two of the Associate Degree Nursing (ADN) program. Building upon the knowledge obtained from previous curriculum, this course focuses on managing clients in the mental health setting by incorporating current standards and evidence-based practice to the professional registered nurse role. Emphasis will be on planning and managing the care of clients in mental health facilities as well as equipping students to face unique psychosocial, spiritual, and physical stressors that healthcare professionals may encounter while carrying out their duties. Application from NURS 215 will be demonstrated in the clinical settings. This is a pass/fail course.

NURS 219 Complex Health: Elimination
Credit Hours: 3
Prerequisite: Acceptance to Year Two of the Associate Degree Nursing (ADN) program. Building upon the foundation of the practical nursing curriculum and aligning with current standards for professional registered nursing practice, this course examines complex disorders of the liver, gastrointestinal, and renal systems. Emphasis is placed on pathophysiology, medical and surgical nursing care management, and inter-professional collaboration essential to the care of patients with these conditions. Students will apply the nursing process and evidence-based practice to promote optimal patient outcomes. Discussions incorporate cultural and psychosocial considerations, highlighting the nurse's role in supporting patient involvement in decision-making, fostering healthy lifestyles, and providing culturally sensitive, patient-centered care.

NURS 221 Complex Health: Nutrition/Metabolic
Credit Hours: 2.5
Prerequisite: Acceptance to Year Two of the Associate Degree Nursing (ADN) program. Building upon the knowledge obtained from previous curriculum and the first semester of professional nursing school, the student will be incorporating current standards, inter-professional collaboration, and evidence-based practice for the professional registered nurse. Complex features of selected acid-base, fluid and electrolyte disorders; selected exocrine disorders and injuries; and management of immune system problems are discussed and explored. The student will evaluate safe and effective care, health promotion, care of the older adult, and cultural awareness. The discussions will be centered on the nursing process and the Gordon's Functional Health patterns framework.

NURS 225 Complex Health: Maternal/Newborn
Credit Hours: 1.5
Prerequisite: Acceptance to Year Two of the Associate Degree Nursing (ADN) program. This course develops clinical judgment in the care of individuals and families experiencing high-risk conditions during pregnancy, labor, birth, and the newborn transition. Emphasis is placed on evidence-based, person-centered, and culturally responsive nursing care, medication safety, and collaboration to promote optimal outcomes for diverse populations.

NURS 228 Complex Health: Family Clinical
Credit Hours: 1
Prerequisite: Acceptance to Year Two of the Associate Degree Nursing (ADN) program. This course develops the student's ability to provide safe, client-centered, and evidence-based nursing care for clients with complex and multisystem health needs. Emphasis is placed on clinical judgment, prioritization, delegation, and interprofessional collaboration in the provision of care. Students apply advanced health assessment techniques appropriate to the ADN scope of practice, utilize the nursing process to manage evolving client conditions, and integrate legal, ethical, and cultural considerations into decision-making. Clinical application of concepts from NURS 227 is demonstrated in supervised settings that reflect current standards of professional nursing practice and support progression toward entry-level registered nurse competencies as defined by the Missouri State Board of Nursing.

NURS 229 Complex Health: Pediatrics
Credit Hours: 1.5
Prerequisite: Acceptance to Year Two of the Associate Degree Nursing (ADN) program. Using concepts and skills previously introduced, this course focuses on using the nursing process to care for the pediatric client/family with alterations in health in acute care, outpatient, and chronic health settings. Emphasis is placed on evidence-based, person-centered, and culturally responsive nursing care, medication safety, and collaboration to promote optimal outcomes for diverse populations.

NURS 230 Complex Health: Adult Clinical I
Credit Hours: 1
Prerequisite: Acceptance to Year Two of the Associate Degree Nursing (ADN) program. In this clinical course, leadership and management concepts from Introduction to Professional Nursing and medical-surgical knowledge will be applied to clinical practice. Students will enhance skills in medication administration, dosage calculation, effective communication, interprofessional collaboration, and information technology to support decision-making. Emphasis is placed on transitioning into the professional nurse 's role, utilizing the nursing process to coordinate continuous patient care, and integrating evidence-based practice to provide culturally sensitive and patient-centered care while promoting patient safety and quality outcomes.

NURS 231 Complex Health: Adult Clinical II
Credit Hours: 1
Prerequisite: Acceptance to Year Two of the Associate Degree Nursing (ADN) program. This clinical course is a continuation of Complex Health: Adult Clinical I and preparation for Complex Health: Adult Clinical III. Using current standards of care and evidenced based practice, the student will begin to coordinate and manage care for multiple clients at the acute care clinical site. The emphasis will be on further development of the professional nursing role in prioritization and coordination of patient care for adults and older adults. This is a pass/fail course.

NURS 233 Complex Health: Adult Clinical III
Credit Hours: 3
Prerequisite: Acceptance to Year Two of the Associate Degree Nursing (ADN) program. Building upon the knowledge obtained from previous curriculum and the first semester of professional nursing school, students will work in an inpatient clinical area focusing on managing clients with complex health care needs. The student will manage care for clients in medical and surgical units, intensive care units (ICU), emergency rooms (ER) and step-down units. There will be an emphasis on prioritization, critical thinking, delegation, problem-solving, advanced physical assessment techniques, cultural awareness, care of the aged, and time management activities. Evidence-based practice is used in applying the assessment process to nursing care. Application of the principles from NURS 213, NURS 221, NURS 234, and NURS 237 will be demonstrated in the appropriate clinical settings while building upon NURS 230 and NURS 231 clinical. This is a pass/fail course.

NURS 234 Complex Health: Activity and Rest
Credit Hours: 3
Prerequisite: Acceptance to Year Two of the Associate Degree Nursing (ADN) program. This course builds upon the knowledge from prior ADN coursework, foundational practical nursing curriculum, and/or paramedic training, focusing on the integration of evidence-based practice and current professional nursing standards in the care of patients with complex cardiovascular, respiratory, shock, and traumatic conditions. Key concepts include pathophysiology, interdisciplinary care planning, age and culturally specific care, pharmacological principles, dosage calculations, and safe, effective nursing care. Emphasis is placed on illness prevention, health promotion, and health maintenance for patients with these conditions through the application of current research, explored through course activities and class discussions.

NURS 237 Complex Health: Cognitive/Perceptual
Credit Hours: 3
Prerequisite: Acceptance to Year Two of the Associate Degree Nursing (ADN) program. Building upon foundational knowledge obtained from previous curriculum and completed ADN courses, this course incorporates current standards and evidence-based practice for the professional registered nurse. The course explores the nursing care of clients with complex neurologic diseases, disorders, and injuries. Related concepts of nursing care such as pathophysiology, interdisciplinary client care planning, cultural considerations of care, pharmacological considerations and dosage calculation, as well as current research are integrated throughout activities and discussion in this course.

NURS 243 Professional Nursing Capstone Clinical
Credit Hours: 2.5
Prerequisite: Acceptance to Year Two of the Associate Degree Nursing (ADN) program. This course emphasizes the transition to the professional role of the registered nurse through the application of current standards and evidence-based practice to coordinate and manage continuous patient care. Students develop leadership and management skills in effective communication, utilizing information technology, and engaging in quality improvement processes. Focus is placed on providing patient-centered and culturally sensitive care within an inter-professional framework that upholds the ethical, legal, and professional responsibilities of nursing practice.

OCCUPATIONAL SAFETY & HEALTH ADMINSTRATION (OSHA)

OSHA 102 OSHA 10-hour Construction Industry
Credit Hours: 1
Prerequisite: None. Course is provided for those seeking employment in a field that operates on construction sites governed by the safety regulations of 29 CFR 1926, Occupational Safety and Health Administration (OSHA) standards for the construction industry. Upon successful completion of this course, the student will earn an OSHA 10-hour completion card. This is a pass/fail course.

OCCUPATIONAL THERAPY (OTA)

OTA 200 Foundations of Occupational Therapy
Credit Hours: 3
Prerequisite: Acceptance to the Occupational Therapy Assistant program. Course presents an introduction to occupational therapy including history, philosophical base, values, ethics, practice framework, and clinical reasoning. Students will learn selected theories and frames of reference as they pertain to interventions in mental health, physical disabilities, pediatrics, and community practice areas. An overview of the occupational therapy process, including assessment, treatment planning, treatment implementation, and discontinuation of intervention will be presented. Role delineation and collaboration of the occupational therapy assistant with other occupational therapy and health care personnel are discussed.

OTA 205 Medical Conditions in Occupational Therapy
Credit Hours: 3
Prerequisite: Acceptance to the Occupational Therapy Assistant program. Course will provide a framework for students to learn about common medical conditions seen by occupational therapy practitioners and to facilitate learning of these conditions from an occupational therapy perspective. It is not intended to emphasize treatment of a diagnosis; however, students will learn about specific factors unique to given conditions that may impact an individual's occupational roles and functions. These factors must be understood and analyzed regarding the relative impact on the individual's occupational performance. The knowledge gained from this course is a necessary prerequisite to Physical Disabilities Practice.

OTA 210 Activity Analysis and Therapeutic Media in Occupational Therapy
Credit Hours: 3
Prerequisite: Acceptance to the Occupational Therapy Assistant Program. This course is designed to foster various occupations or activities used as therapeutic interventions in occupational therapy. Emphasis on awareness of activity demands, contexts, adapting, grading, and safe implementation of occupations or activities. This course also provides knowledge and use of tools, equipment, and basic techniques of therapeutic media. Emphasis is given to analysis and instruction of activities frequently used as occupational therapy media in multiple community and clinical settings.

OTA 215 Mental Health and Geriatric Practice
Credit Hours: 4
Prerequisite: Acceptance to the Occupational Therapy Assistant program. Course presents the role of the Occupational Therapy Assistant in the psychosocial area as well as the geriatric population of the Occupational Therapy practice. Students will learn selected frames of reference and explore the effects of psychosocial dysfunction on areas of occupation. Students will learn skills necessary to assess, implement, and document intervention in a variety of mental health and geriatric settings. Client factors, including culture and diversity, therapeutic interactions and methods are studied. Students will develop skills in administering individual and group interventions, professional communication, conflict negotiation, and advocacy. This course integrates the Occupational Therapy process and collaboration with the Occupational Therapist through its review of advanced, appropriate select Occupational Therapy therapeutic interventions and technique health populations. The student incorporates knowledge of influences of environment, individual, family culture and access to Occupational Therapy services on occupational performance.

OTA 220 Pediatric and Adolescent Practice
Credit Hours: 4
Prerequisite: Acceptance to the Occupational Therapy Assistant program. Treatment of pediatric and adolescent conditions. Normal and delayed development of the infant, child and adolescent are explored. The lab component incorporates theoretical principles and provides opportunities for students to develop assessment, intervention planning and implementation, and documentation skills to address a range of childhood sensory-motor, cognitive and psychosocial performance deficits. Students will learn to adapt the environment, tools, materials, and occupations to meet the self-care, work/play and leisure needs of the pediatric and adolescent population. Lab activities, site visits and level I fieldwork opportunities will enable students to participate in and apply pediatric and adolescent treatment principles to practice.

OTA 250 Functional Kinesiology
Credit Hours: 3
Prerequisite: Acceptance to the Occupational Therapy Assistant program. In this course, students use and apply their knowledge of anatomy and physiology to study muscle groups and their function relative to performing various activities. Analysis of functional movement patterns required for work, self-care, play, and leisure activities is emphasized. Manual muscle testing, range of motion, goniometry and basic transfer skills are practiced. Principles of energy conservation, joint protection and work simplification are presented. Prevention, health maintenance and safety procedures relevant to functional mobility are reviewed. (2 Lecture: 1 Lab)

OTA 255 Physical Disabilities Practice
Credit Hours: 4
Prerequisite: Acceptance to the Occupational Therapy Assistant program. Course provides in-depth opportunities for students to develop assessment, intervention planning, intervention, and documentation skills to address a wide range of adult and geriatric physical disabilities and conditions typically treated by occupational therapists and occupational therapy assistants. Topics include, but are not limited to, stroke, spinal cord injury, fractures and joint replacement, head injury, and cardiopulmonary disorders. The use of splinting, orthotics, modalities, and assistive technology in treatment will also be presented. Students will learn to adapt the environment, tools, materials, and occupations to meet the self-care, work, play, and leisure needs of the adult and geriatric population. Lab activities

and level I fieldwork opportunities will enable students to participate in and apply physical disabilities treatment principles to practice.

OTA 260 Community Practice and Emerging Practice in Occupational Therapy
Credit Hours: 3
Prerequisite: Acceptance to the Occupational Therapy Assistant program. Students will learn the basic roles and functions of an occupational therapy practitioner and the role of occupational therapy in medical, educational, and community models, as well as emerging areas of practice that are predicted to grow in the future. Students explore a variety of work settings, and/or types of practice including OT role delineations in community based and non-traditional settings. The student will study specialty areas through case discussion, enhancement of treatment techniques, review of literature, and current trends. Site visits and volunteer opportunities will enable students to participate in and apply occupational therapy assessment and intervention principles to a wide range of community settings including vocational, vocational rehabilitation, home health, and emerging community practice areas. Emphasis will be on community settings in the students ' state and geographic region.

OTA 265 Ethics, Management and Leadership
Credit Hours: 3
Prerequisite: Acceptance to the Occupational Therapy Assistant program. Course focuses on the OTA role in managing and directing occupational therapy services. It covers ethical provision of services, departmental operations, program development, supervisory requirements, personnel development and supervision, professional team building, quality assurance, compliance with regulations, reimbursement, and national and state credentialing requirements. Techniques for developing a resume and job interview skills are practiced. The importance and responsibility for ongoing OTA professional development, ethical practice, contributing to research and evidence-based practice, attention to emerging practice issues and areas, and international perspectives are explored.

OTA 270 Preclinical and Professional Skills
Credit Hours: 2
Prerequisite: Acceptance to the Occupational Therapy Assistant program. Course is designed to foster practical professional skills in critical thinking using literature to make evidence-based practice decisions and recommendations and using theory to guide practice, all through the completion of a professional portfolio.

OTA 290 Level II Fieldwork A
Credit Hours: 8
Prerequisite: Acceptance to the Occupational Therapy Assistant program. Full-time clinical fieldwork experience in mental health, physical disabilities, geriatric, pediatric, and/or community-based practice working under the supervision of an OTR and/or COTA. Focus is on achieving entry-level competence in planning and implementing interventions.

OTA 295 Level II Fieldwork B
Credit Hours: 8
Prerequisite: Acceptance to the Occupational Therapy Assistant program. Full-time clinical fieldwork experience in mental health, physical disabilities, geriatric, pediatric, and/or community-based practice working under the supervision of an OTR and/or COTA. Focus is on achieving entry-level competence in planning and implementing interventions.

PHYSICAL EDUCATION - ACTIVITY (PEAC)

PEAC 124 Varsity Basketball – Men
Credit Hours: 1
Prerequisite: Consent of athletic director. Participation in the men's varsity basketball program.

PEAC 125 Varsity Basketball – Women
Credit Hours: 1
Prerequisite: Consent of athletic director. Participation in the women's varsity basketball program.

PHILOSOPHY (PHIL)

PHIL 101 Introduction to Philosophy
Credit Hours: 3
MOTR Equivalent: MOTR PHIL 100 – Introduction to Philosophy
Prerequisite: ENGL 070 with a grade of C or higher or equivalent placement scores. An introduction to historical and topical themes in philosophy, such as free will, God, personal identity, the limits of knowledge, the nature of inferential reasoning, morality, and social justice.

PHIL 102 Ethics
Credit Hours: 3
MOTR Equivalent: MOTR PHIL 102 – Introduction to Ethics
Prerequisite: ENGL 070 with a grade of C or higher or equivalent placement scores. An introductory examination of the foundations of moral discourse and ethical practice. This course includes both an introduction to a number of

moral theories and discussion of contemporary moral issues.

PHIL 104 Living Religions
Credit Hours: 3
MOTR Equivalent: MOTR RELG 100 – World Religion
Prerequisite: ENGL 070 with a grade of C or higher or equivalent placement scores. An introduction to a wide variety of the world ‘s living religions as both beliefs and practices, and an analysis of the historical-cultural value systems underpinning their various divergent or overlapping value systems. Religions reviewed include Hinduism, Buddhism, Judaism, Christianity, Islam and to a lesser extent Jainism, Sikhism, Confucianism, Daoism, and Shinto.

PHARMACY TECHNOLOGY (PHRM)

PHRM 102 Top 200 Medications
Credit Hours: 1
Prerequisite: ENGL 070 with a grade of C or higher or equivalent placement scores. A thorough understanding of the Top 200 medications is essential for the Pharmacy Technician Certification Board (PTCB) exam. The course provides a study of the Top 200 medications prescribed in the United States, with an emphasis on FDA approved indications, and brand and generic names.

PHRM 104 Calculations for Pharmacy Technician
Credit Hours: 3
Prerequisite: MATH 061 with a grade of C or higher or equivalent placement score. Course provides a study of all basic and advanced calculations expected of a pharmacy technician in all practice settings. Students will study and practice percentages, significant figures, alligation, powder volumes, compounding formulas, weight-based dosing and problem-solving using ratios.

PHRM 106 Role of the Pharmacy Technician
Credit Hours: 3
Prerequisite: ENGL 070 with a grade of C or higher or equivalent placement scores. Introduction to the fundamentals and knowledge necessary to take the Pharmacy Technician Certification Board (PTCB) exam. Course will provide an in-depth study of the role of a pharmacy technician in the retail pharmacy setting, including a brief history of pharmacy and how it has evolved into today ‘s pharmacy, drug regulation and control, retail pharmacy organization and operational standards of practice (SOP). Content will include new and refill prescriptions, transfer prescriptions, SIG codes, DAW codes, non-sterile compounding and labeling requirements.

PHRM 109 Pharmacology
Credit Hours: 3
Prerequisite: None. Course introduces basic pharmacological principles needed by pharmacy technicians, including basic understanding of the drug action, how antagonists and agonists work, the significance and meaning of blood concentration-time profiles, and other aspects of pharmacology suited for pharmacy technicians.

PHRM 110 Federal Law and Ethics in Pharmacy Practice
Credit Hours: 2
Prerequisite: ENGL 070 with a grade of C or higher or equivalent placement scores. Pharmacy is one of the most regulated industries in our nation and as such, pharmacy technicians must possess an understanding of Federal pharmacy laws. The course will provide a study of the history of the FDA, Federal laws the govern pharmacy practice, and ethical dilemmas in pharmacy practice.

PHRM 115 Pharmacy Technician Certification
Credit Hours: 3
Prerequisite: None. Course provides a comprehensive review of the content areas of the Pharmacy Technician Certification Exam (PTCE) to prepare students to take the PTCE at the end of the course. Students who pass the PTCE are designated as Certified Pharmacy Technicians (CPhT).

PHRM 122 Advanced Top 200 and Over-the-Counter Medications
Credit Hours: 3
Prerequisite: PHRM 102 with a grade of C or higher. This course is a continuation of the Top 200 Medications course. Knowledge of brand and generic drug names and FDA approved indications will be expanded to include common dosage forms, common dosing strategies and drug-drug interactions, as it relates to a pharmacy technician‘s practice.

PHRM 124 Inventory Control and Financial Issues in Pharmacy
Credit Hours: 3
Prerequisite: MATH 061 with a grade of C or higher or equivalent placement score. Course will provide a study of the pharmacy technician ‘s role in inventory systems, including order placement, returns and handling of expired medications. Course will provide a review of insurance reimbursement and contracting, the role of pharmacy benefit managers (PBM), prior authorization (PA), worker ‘s compensation programs, coupons, discount cards and patient financial assistance programs.

PHRM 175 Professional Practical Experience
Credit Hours: 3
Prerequisite: Consent of program coordinator. Field-based professional practice experience in a hospital or commercial pharmacy setting. Students will be assigned specific professional practice objectives and skills to be completed at the site and will participate in daily pharmacy activities. This is an unpaid work experience requiring 80 to 120 hours of participation.

PHYSICS (PHYS)

PHYS 110 Survey of Physics with Lab
Credit Hours: 5
MOTR Equivalent: MOTR PHYS 100L –Essentials in Physics with Lab
Prerequisite: MATH 110 or MATH 112 with a grade of C or higher or equivalent placement score. A survey course covering traditional physics topics with applications in biology and medicine. Topics covered include motion, force, energy, sound, fluids, temperature, electricity, and light. Possible applications include sports, balance & stability, sonography, blood flow, medical imaging, nuclear medicine, and human function.

PHYS 180 Problems in Physics
Credit Hours: 1 to 3
Prerequisite: Consent of instructor. Independent study of a special problem in physics under the supervision of a science instructor.

PHYS 203 Statics
Credit Hours: 3
Prerequisite: PHYS 118 with a grade of C or higher. Application of the principles of mechanics to engineering problems of equilibrium. Topics include resultants, equilibrium, friction, trusses, center of gravity and moment of inertia.

PHYS 211 Engineering Physics I with Lab
Credit Hours: 5
MOTR Equivalent: MOTR PHYS 200L – Advanced Physics I with Lab
Prerequisite: MATH 130 with a grade of C or higher. Corequisite: MATH 131. An introduction to the fundamental ideas of physics. Topics include mechanics, oscillatory motion and thermodynamics. First course in calculus-based physics for the science and engineering student.

PHYS 212 Engineering Physics II with Lab
Credit Hours: 5
Prerequisite: PHYS 211 with a grade of C or higher and MATH 131 with a grade of C or higher. A continuation of Engineering Physics I, building on the fundamental concepts of physics. Topics covered include oscillatory motion, electrostatics, magnetism, circuits, electromagnetism, optics, and light. This is the second course in a calculus-based sequence designed for science and engineering students. (4 lecture:1 lab)

POLITICAL SCIENCE (POLS)

POLS 101 American/National Government
Credit Hours: 3
MOTR Equivalent: MOTR POSC 101 – American Government
Prerequisite: None. Survey course of the government of the United States and its political values, processes and structures. Attention is given to the government‘s origins, politics, branches of government, rights and responsibility of the residents of the U.S. and Missouri. A study of the Missouri Constitution is included to meet the state‘s requirements in Senate Bill No. 4. Students will also pass the Missouri Higher Education Civic Exam with a 70 percent or higher in compliance with Senate Bill No. 807.

POLS 103 Introduction to Political Science
Credit Hours: 3
Prerequisite: ENGL 070 with a grade of C or higher or equivalent placement scores. Study of the nature of government, politics, the state, relations among nations, and the areas of political science. Students will make a preliminary examination of governmental institutions and selected political theories with an emphasis on basic principles, concepts and characteristics of governments around the world.

POLS 109 Civics and the Constitutions
Credit Hours: 0
Prerequisite: None. Designed to meet the requirements of Senate Bill 807. Intended for students testing out of history or government courses or transferring these courses from another state. This is a pass/fail online course.

POLS 175 Political Science Internship
Credit Hours: 1 to 4
Prerequisite: Consent of instructor. On-the-job work experience provides an opportunity for the student to work in a state or local government office or in a political action setting.

POLS 180 Problems in Political Science
Credit Hours: 1 to 3
Prerequisite: Consent of instructor. Independent study of a special problem in political science under the supervision of a political science instructor.

PHYSICAL EDUC - PROFESSIONAL (PPRO)

PPRO 101 Sports Officiating I
Credit Hours: 2
Prerequisite: None. Includes lectures, readings, class discussions, and field experience in the officiating of fall sports, including football, soccer, basketball, etc.

PPRO 102 Sports Officiating II
Credit Hours: 2
Prerequisite: None. Includes lectures, readings, class discussions, and field experience in the officiating of spring sports, including softball, baseball, volleyball, etc.

PPRO 104 Care and Prevention of Athletic Injuries
Credit Hours: 3
Prerequisite: None. Introduction to athletic training and its administrative procedures and problems. Includes prevention and care of injuries and other special considerations.

PPRO 180 Problems in Professional PE
Credit Hours: 1 to 3
Prerequisite: Consent of instructor. Independent study of a special problem in professional physical education under the supervision of a physical education instructor.

PSYCHOLOGY (PSY)

PSY 101 General Psychology
Credit Hours: 3
MOTR Equivalent: MOTR PSYC 100 – General Psychology
Prerequisite: ENGL 070 with a grade of C or higher or equivalent placement scores. Introduction to the scientific study of behavior and mental processes. Includes a survey of historical and current theories, theorists and perspectives in psychology. Goals include increasing critical thinking and intellectual curiosity about psychological phenomenon and provides a basis for further study in the field. Topics include neurology, sensation and perception, consciousness, learning, psychometrics, personality development, and mental illness and wellness. Writing papers in APA format is required.

PSY 102 Child Psychology
Credit Hours: 3
Prerequisite: ENGL 070 with a grade of C or higher or equivalent placement scores. Investigation into the interaction of biological and environmental factors affecting the physiological, intellectual and emotional development of the child from conception through adolescence. Writing papers in APA format is required.

PSY 104 Psychology of Personal Adjustment
Credit Hours: 3
Prerequisite: ENGL 070 with a grade of C or higher or equivalent placement scores. Overview of the major theories, concepts and principles in psychology that can be applied to personal and social adjustment. Topics include self-esteem, motivation, stress management, and others.

PSY 180 Problems in Psychology
Credit Hours: 1 to 3
Prerequisites: PSY 101 with a grade of C or higher and consent of instructor. Writing papers in APA format is required. Students are advised to have completed ENGL 101 prior to enrolling. Independent study of a special problem in psychology under the supervision of a psychology instructor.

PSY 210 Lifespan Development
Credit Hours: 3
MOTR Equivalent: MOTR PSYC 200 – Lifespan Human Development
Prerequisite: PSY 101 with a grade of C or higher. Writing papers in APA format is required. Students are advised to have completed ENGL 101 prior to enrolling. Study of major theories of psychological development during infancy, childhood, adolescence, and adulthood. Topics include physical, psychosocial and cognitive development across the lifespan giving consideration to cultural and individual variations.

PSY 220 Abnormal Psychology
Credit Hours: 3
Prerequisite: PSY 101 with a grade of C or higher. Not offered every semester. Writing papers in APA format is required. Students are advised to have completed ENGL 101 prior to enrolling. Study of the historical and cultural context of abnormal behavior and diagnosis of mental disorders. Topics include a survey of the causes and treatment of major mental illness such as mood disorders, anxiety disorders, substance abuse, schizophrenia, and personality disorders. Writing papers in APA format is required.

RADIOLOGIC TECHNOLOGY (RAD)

RAD 106 Clinical Education I
Credit Hours: 3
Prerequisite: Acceptance to the Radiologic Technology program. Radiology student will complete an average of 240 contact hours, which equates to 3 credit hours. Supervised clinical rotations will be performed at assigned clinical sites. Clinical education provides the students with the opportunity to practice the skills and theory taught in the classroom. The "Five Steps to Clinical Competency" allow the student to progress in competency exams while practicing patient care and professionalism. Students are expected to complete seven mandatory competencies.

RAD 109 Clinical Education II
Credit Hours: 2
Prerequisite: Acceptance to the Radiologic Technology program. Radiology student will complete an average of 160 contact hours, which equates to 2 credit hours. Supervised clinical rotations will be performed at assigned clinical sites. Clinical education provides the students with the opportunity to practice the skills and theory taught in the classroom. The "Five Steps to Clinical Competency" allow the student to progress in competency exams while practicing patient care and professionalism. Students are expected to complete nine competencies.

RAD 111 Clinical Education III
Credit Hours: 2
Prerequisite: Acceptance to the Radiologic Technology program. Radiology student will complete an average of 160 contact hours ,which equates to 2 credit hours. Supervised clinical rotations will be performed at assigned clinical sites. Clinical education provides the students with the opportunity to practice the skills and theory taught in the classroom. The "Five Steps to Clinical Competency" allow the student to progress in competency exams while practicing patient care and professionalism. Students are expected to complete nine competencies.

RAD 113 Clinical Education IV
Credit Hours: 4
Prerequisite: Acceptance to the Radiologic Technology program. Radiology student will complete an average of 360 contact hours, which equates to 4 credit hours. Supervised clinical rotations will be performed at assigned clinical sites. Clinical education provides the students with the opportunity to practice the skills and theory taught in the classroom. The "Five Steps to Clinical Competency" allow the student to progress in competency exams while practicing patient care and professionalism. Students are expected to complete the remainder of required competencies.

RAD 115 Clinical Education V
Credit Hours: 4
Prerequisite: Acceptance to the Radiologic Technology program. Radiology student will complete an average of 360 contact hours, which equates to 4 credit hours. Supervised clinical rotations will be performed at assigned clinical sites. Clinical education provides the students with the opportunity to practice the skills and theory taught in the classroom. The "Five Steps to Clinical Competency" allow the student to progress in competency exams while practicing patient care and professionalism. Students are expected to complete the remainder of required competencies.

RAD 120 Radiographic Procedures I
Credit Hours: 3
Prerequisite: Acceptance to the Radiologic Technology program. Students will learn and practice the proper steps in the completion of radiographic exams including utilization of imaging equipment and proper patient positioning. Radiographic anatomy, radiation safety practices and patient care skills are reinforced. Students are introduced to basic film critique. Course will cover exams of the chest, abdomen and extremities. Course is a portion of the five steps to clinical competency and must be completed with a score of 85 percent or better. (1 lecture, 2 lab)

RAD 122 Radiographic Procedures II
Credit Hours: 3
Prerequisite: Acceptance to the Radiologic Technology program. Students will learn and practice the proper steps in the completion of radiographic exams including utilization of imaging equipment and proper patient positioning. Radiographic anatomy, radiation safety practices and patient care skills are reinforced. Students are introduced to basic film critique. Course will cover exams of the thorax and spines, as well as contrast exams. Course is a portion of the five steps to clinical competency and must be completed with a score of 85 percent or better. (1 lecture, 2 lab)

RAD 124 Radiographic Procedures III
Credit Hours: 3
Prerequisite: Acceptance to the Radiologic Technology program. Students will learn and practice the proper steps in the completion of radiographic exams including utilization of imaging equipment and proper patient positioning. Radiographic anatomy, radiation safety practices and patient care skills are reinforced. Students are

introduced to basic film critique. Course will cover exams of the skull, facial bones, and geriatric and pediatric imaging. Course is a portion of the five steps to clinical competency and must be completed with a score of 85 percent or better. (2 lecture, 1 lab)

RAD 128 Introduction to Radiologic Sciences and Patient Care
Credit Hours: 3
Prerequisite: Acceptance to the Radiologic Technology program. An overview of electricity, electromagnetic theory, circuitry, x-ray generation, production, interaction, and the basic characteristics of natural radiation.

RAD 130 Radiation Production and Characteristics
Credit Hours: 3
Prerequisite: Acceptance to the Radiologic Technology program. An overview of electricity, electromagnetic theory, circuitry, x-ray generation, production, interaction, and the basic characteristics of natural radiation.

RAD 134 Radiographic Exposures and Quality Control
Credit Hours: 3
Prerequisite: Acceptance to the Radiologic Technology program. Introduction to factors involved in quality image production and the correlation of these factors and their control. Overview of image receptors, scatter control and radiographic exposure techniques is provided. Students will identify and evaluate acceptable limits for equipment operation.

RAD 137 Radiation Protection
Credit Hours: 3
Prerequisite: Acceptance to the Radiologic Technology program. Student radiologic technologists must be able to protect patients and themselves from overexposure to radiation. Students will learn about dose limits and proper shielding, as well as radiation monitors and detectors. Radiation effects and potential biological damage of ionizing radiation will be discussed. The as low as reasonably achievable (ALARA) principle will be taught as well as the objectives of a radiation protection program. Students will have a basic understanding of the varieties of interactions between ionizing radiation and living cells.

RAD 140 Radiologic Pharmacology
Credit Hours: 3
Prerequisite: Acceptance to the Radiologic Technology program. Overview of the foundations of pharmacology, including pharmacokinetics, pharmacodynamics, pertinent laws, and safety issues. Students will gain an understanding of drug categories, their actions and commonly used drugs in each category. Additionally, this course will emphasize contrast media commonly used in medical imaging, routes of administration and venipuncture techniques.

RAD 142 Trauma and Advanced Imaging
Credit Hours: 3
Prerequisite: Acceptance to the Radiologic Technology program. Builds on the positioning knowledge developed in the radiographic procedures courses. Advanced imaging techniques and approaches for imaging injured patients will be discussed. Radiographic anatomy, radiation protection and patient care skills will continue to be stressed. Course is a portion of the five steps to clinical competency and must be completed with a score of 85 percent or better. (2 lecture, 1 lab)

RAD 144 Radiation Biology
Credit Hours: 2
Prerequisite: Acceptance to the Radiologic Technology program. Reinforcement of the varieties of interactions between ionizing radiation and living cells. Acute and chronic effects of radiation are described.

RAD 146 Imaging Equipment
Credit Hours: 3
Prerequisite: Acceptance to the Radiologic Technology program. Presents information about image intensified fluoroscopy, mobile equipment, and automatic exposure devices. Image acquisition utilizing film/screen, computed radiography (CR) and digital radiography (DR) systems and the appropriate processing units will be discussed.

RAD 150 Radiographic Pathology
Credit Hours: 3
Prerequisite: Acceptance to the Radiologic Technology program. Provides a basic understanding of disease processes as they relate to radiographic procedures. Course will include facts, etiology, symptoms, treatments, and radiographic appearance of many diseases and discussion of how one must adjust the radiographic technique for each of these disorders.

RAD 152 Image Analysis
Credit Hours: 3
Prerequisite: Acceptance to the Radiologic Technology program. Utilizes knowledge of anatomy, positioning and exposure factors to critique radiographs and determine if radiographs are of proper diagnostic quality. After a judgment is made, the student must determine which factors require change, how to accomplish the change, and why a change is necessary.

RAD 154 Sectional Anatomy
Credit Hours: 3
Prerequisite: Acceptance to the Radiologic Technology program. Apply knowledge of systemic human anatomy to determine the sectional relationships of human organs, vessels and tissues. Knowledge of cross-sectional anatomy reinforces prior anatomical knowledge and leads to a greater understanding of modalities such as computed tomography (CT), magnetic resonance (MR) and ultrasound.

RAD 169 Comprehensive CT Course for Technologists
Credit Hours: 5
Prerequisite: Acceptance to the Radiologic Technology program. This course will prepare registered radiologic technologists or future registered radiologic technologists for post-primary certification and registration in Computed Tomography. This course will consists of the four major CT content categories (patient care, safety, image production, and procedures).

RAD 170 Preparing for Professionalism
Credit Hours: 3
Prerequisite: Acceptance to the Radiologic Technology program. A series of review assessments are administered, enabling students to identify their strengths and weaknesses. Students will prepare for employment through the development of a letter of intent, a resume and a thank you letter. Employment skills are researched and discussed.

RAD 179 Advanced Modality Clinic
Credit Hours: 4
Prerequisite: ARRT Registered Technologist or a second year student in an accredited Radiology Program. Clinical education provides the student with the opportunity to practice the skills and theory taught in the classroom. Students will demonstrate advanced imaging modality competency while practicing patient care and professionalism. Exam performance skills and critical thinking will be evaluated in this course.

RESPIRATORY CARE (RSC)

RSC 101 Fundamentals of Respiratory Care
Credit Hours: 3
Prerequisite: Admission to the MHPC Respiratory Care Program through ECC. Corequisites: RSC 110, RSC 115, RSC 120, RSC 121, and RSC 165. This course introduces the foundational principles of respiratory therapy and prepares students with the essential knowledge to become competent respiratory therapists. Students will examine the history and development of the respiratory care profession while gaining an understanding of core concepts such as patient assessment, safety protocols, infection control, quality of care, and ethical responsibilities.

RSC 105 Introduction to Respiratory Disease
Credit Hours: 3
Prerequisite: RSC 101, RSC 110, RSC 115, RSC 120, RSC 121, and RSC 165. This course introduces students to a variety of pulmonary diseases, emphasizing their pathophysiology, etiology, cardiopulmonary symptoms, and disease management.

RSC 110 Respiratory Care Physiology
Credit Hours: 3
Prerequisite: Admission to the MHPC Respiratory Care Program through ECC. Corequisites: RSC 101, RSC 115, RSC 120, RSC 121, and RSC 165. This course introduces students to the normal anatomy and physiology of the cardiopulmonary system. Emphasis will be on the importance of heart and lung relationship. Topics covers will include conduction system of the heart, normal and abnormal electrocardiogram rhythms, and acid-base status.

RSC 115 Respiratory Equipment & Therapeutics
Credit Hours: 3
Prerequisite: Admission to the MHPC Respiratory Care Program through ECC. Corequisites: RSC 101, RSC 110, RSC 120, RSC 121, and RSC 165. This course provides an overview of the equipment and therapeutic techniques used in the delivery of respiratory care. Emphasis is placed on the selection, operation, and troubleshooting of equipment, as well as the clinical application of therapies in treating patients with acute and chronic cardiopulmonary conditions.

RSC 120 Respiratory Clinical I
Credit Hours: 1
Prerequisite: Admission to the MHPC Respiratory Care Program through ECC. Corequisites: RSC 101, RSC 110, RSC 121, and RSC 165. This introductory clinical course provides students with their first supervised experience in patient care within a healthcare setting. Students will apply basic respiratory therapy skills such as patient assessment, vital sign monitoring, oxygen therapy, and infection control. Emphasis is placed on developing clinical competence, communication, professionalism, and adherence to safety and ethical standards.

RSC 121 Respiratory Care Lab I
Credit Hours: 2
Prerequisite: Admission to the MHPC Respiratory Care Program through ECC. Corequisites: RSC 101, RSC 110, RSC 115, RSC 120, and RSC 165. This introductory laboratory course offers students foundational hands-on experience in

respiratory therapy. Students will learn basic clinical skills including vital sign measurement, patient assessment, proper use of basic respiratory equipment, oxygen delivery methods, and infection control procedures. The lab emphasizes safety, accuracy, and professional conduct as students begin to develop the competencies required for entry into clinical practice.

RSC 150 Advanced Respiratory Care
Credit Hours: 3
Prerequisites: RSC 105, RSC 155, RSC 160, RSC 170, RSC 171, and RSC 205. Corequisites: RSC 201, RSC 220, RSC 221, and RSC 290. This course focuses on the advanced principles and practices of respiratory care in critical care settings. Students will explore complex cardiopulmonary pathologies, advanced practices, and the application of invasive and non-invasive mechanical ventilation strategies.

RSC 155 Mechanical Ventilation
Credit Hours: 3
Prerequisites: RSC 101, RSC 110, RSC 115, RSC 120, RSC 121, and RSC 165. Corequisites: RSC 105, RSC 160, RSC 170, RSC 171, and RSC 205. This course focuses on mechanical ventilation. Students will learn indications, modes, physiological effects, and complications of mechanical ventilation. Students will gain an understanding of the importance of assessment for liberating patients from ventilatory support.

RSC 160 Cardiopulmonary Diagnostics
Credit Hours: 3
Prerequisites: RSC 101, RSC 110, RSC 115, RSC 120, RSC 121, and RSC 165. Corequisites: RSC 105, RSC 155, RSC 170, RSC 171, and RSC 205. This course provides an in-depth study of diagnostic procedures used to evaluate cardiopulmonary function in clinical settings. Students will learn the principles and applications of imaging interpretation, invasive Cardiac Monitoring, and hemodynamic monitoring. Emphasis is placed on hospital-based procedures, data analysis, and the integration of diagnostic findings.

RSC 165 Respiratory Pharmacology
Credit Hours: 2
Prerequisites: RSC 101, 105, 110, 115, 120, 121 with a grade of C or higher. Corequisites: RSC 101, RSC 110, RSC 115, RSC 120, and RSC 121. This course introduces the principles of pharmacology as they apply to respiratory care. Students will study drug classifications, mechanisms of action, indications, contraindications, and side effects of medications commonly used in the treatment of cardiopulmonary diseases. Emphasis is placed on bronchodilators, corticosteroids, mucolytics, antibiotics, and emergency medications. The course also covers routes of administration and dosage calculations.

RSC 170 Respiratory Care Clinical II
Credit Hours: 2
Prerequisites: RSC 101, RSC 110, RSC 115, RSC 120, RSC 121,and RSC 165. Corequisites: RSC 105, RSC 155, RSC 160, RSC 171, and RSC 205. This intermediate clinical course builds upon foundational skills as students will perform advanced respiratory procedures such as airway management, bronchial hygiene therapy, aerosol and medication delivery, and ventilator monitoring. Emphasis is placed on clinical decision-making, critical thinking, and professional communication while managing care for patients with acute and chronic cardiopulmonary conditions.

RSC 171 Respiratory Care Lab II
Credit Hours: 1
Prerequisites: RSC 101, RSC 110, RSC 115, RSC 120, RSC 121, and RSC 165. Corequisites: RSC 105, RSC 155, RSC 160, RSC 170, and RSC 205. This hands-on lab course provides practical experience in the setup, operation, and troubleshooting of mechanical ventilators. Students will apply concepts learned in theory courses by applying previous knowledge with various ventilator modes and settings in simulated clinical scenarios. Emphasis is placed on patient-ventilator interaction, monitoring techniques, alarm identifications, and patient specific adjustments.

RSC 201 Neonatal and Pediatric Respiratory Care
Credit Hours: 3
Prerequisites: RSC 105, RSC 155, RSC 160, RSC 170, RSC 171, and RSC 205. Corequisites: RSC 150, RSC 220, RSC 221, and RSC 290. The course prepares students to provide specialized, safe, and effective respiratory care of neonatal and pediatrics in intensive care settings. Students will learn to apply age-appropriate techniques in airway management, oxygen therapy, mechanical ventilation, and resuscitation. Emphasis is placed on developmental physiology and equipment selection.

RSC 205 Specialized Respiratory Procedures
Credit Hours: 3
Prerequisites: RSC 105, RSC 155, RSC 160, RSC 170, RSC 171, and RSC 205. Corequisites: RSC 150, RSC 201, RSC 221, and RSC 290. This intermediate clinical course builds upon foundational skills as students will perform advanced respiratory procedures such as airway management, bronchial hygiene therapy, aerosol and medication delivery, and ventilator monitoring. Emphasis is placed on clinical decision-making, critical thinking, and professional

communication while managing care for patients with acute and chronic cardiopulmonary conditions.

RSC 221 Respiratory Care Lab III
Credit Hours: 1
Prerequisites: RSC 105, RSC 155, RSC 160, RSC 170, RSC 171, and RSC 205. Corequisites: RSC 150, RSC 201, RSC 220, and RSC 290. This advanced laboratory course provides hands-on training in Specialty areas of care. Students will practice advanced respiratory skills including neonatal resuscitation, pediatric airway management, ventilator setup and management for all age groups. Emphasis is placed on age-specific assessment, equipment selection, simulation-based scenarios, and interdisciplinary team communication. This course prepares students for high-acuity clinical environments by reinforcing critical thinking, technical proficiency, and clinical decision-making.

RSC 291 Respiratory Care Capstone
Credit Hours: 2
Prerequisites: RSC 105, RSC 155, RSC 160, RSC 170, RSC 171, and RSC 205. Corequisites: RSC 150, RSC 201, RSC 220, and RSC 221. This course is designed to prepare students for the National Board of Respiratory Care exams. Emphasis is placed on interview styles, preparation for credentialing exams, and the development of a professional portfolio highlighting their employability skills as they transition from student to professional.

SOCIOLOGY (SOC)

SOC 100 General Sociology
Credit Hours: 3
MOTR Equivalent: MOTR SOCI 101 – General Sociology
Prerequisite: None. Introduction to the basic principles, concepts, research strategies, and empirical findings representative of the field today. Explores the relationships of individuals and groups in the context of broader social patterns. Establishes a basis for further study in the field. Course topics may include gender and racial inequality, deviance, economic and political institutions, social mobility, and concepts related to current social and cultural change.

SOC 101 Social Problems
Credit Hours: 3
MOTR Equivalent: MOTR SOCI 201 – Social Problems
Prerequisite: None. Examines objective social conditions that have been defined as social problems. Focuses on gaining factual and theoretical knowledge to build better explanations for the existence and persistence of social problems in light of social controls and democratic values. Explores options for solutions to specific social problems. Topics include racial inequality, gender stratification, poverty, mass media, and education among others.

SOC 102 Marriage and Family
Credit Hours: 3
MOTR Equivalent: MOTR SOCI 204 – Introduction to Family Studies
Prerequisite: None. Explores the social and historical roots of marriage as both a social institution and an intimate relationship. Examines the sources of and the challenges created by the diversity of family forms. Topics include intimacy, gender, dating and courtship, conflict and communication, divorce, and parenting.

SOC 103 Introduction to Social Work
Credit Hours: 3
Prerequisite: None. Provides background knowledge of the field, an overview of social problems and social services, and methods of social work practice. Topics may include poverty, substance abuse, mental illness, crime, family, education, racism, and sexism among others. Each topic is discussed with an interest in identifying the opportunities for and challenges to effective social work.

SOC 110 Media, Culture, & Society
Credit Hours: 3
MOTR Equivalent: MOTR SBSC 100 – Introduction to Mass Communications
Prerequisite: None. Introductory interdisciplinary survey of the nature and influence of mass media in our lives and society. Students will analyze mass media foundations, media industry structure, its evolving convergence, media's cultural and ethical influence, governmental involvement, and media's personal, local, national, and global impact.

SOC 120 American Diversity
Credit Hours: 3
MOTR Equivalent: MOTR SOCI 202 – Introduction to Studies of Race and Ethnicity
Prerequisite: None. Overview of global and American diversity resulting from cultural interactions, especially in the areas of art, government, economics, and religion, as well as a historical perspective. Students will gain a greater understanding of diversity from an individual and community perspective.

SOC 180 Problems in Sociology
Credit Hours: 1 to 3
Prerequisite: Consent of instructor. Independent study of a special problem in sociology under the supervision of a sociology instructor.

SPANISH (SPAN)

SPAN 101 Elementary Spanish I
Credit Hours: 3
MOTR Equivalent: MOTR LANG 103 – Spanish I
Prerequisite: None. Begins the four basic skills of language communication: listening, speaking, reading, and writing. Includes an introduction to the Spanish culture. Concentrates on the present indicative tense with the course conducted primarily in Spanish.

SPAN 102 Elementary Spanish II
Credit Hours: 3
MOTR Equivalent: MOTR LANG 104 – Spanish II
Prerequisite: SPAN 101. Concentrates on the preterit and imperfect tenses and reflexive constructions for students to further enhance their ability to listen, speak, read, and write. Continues study of the Spanish culture. Course is conducted primarily in Spanish.

SURGICAL TECHNOLOGY (SRGT)

SRGT 200 Introduction to Surgical Technology
Credit Hours: 1
Prerequisite: Acceptance to the Surgical Technology program. Establishes the profession of Surgical Technology, history of surgery, roles of the surgical team, professionalism, communication and teamwork, healthcare facility structure and environment, environmental hazards, and legal, moral, and ethical issues.

SRGT 205 Fundamentals of Surgical Technology
Credit Hours: 3
Prerequisite: Acceptance to the Surgical Technology program. Establishes the fundamental knowledge and skills required for safe and effective practice of the surgical technologist with emphasis on aseptic technique.

SRGT 210 Surgical Equipment and Instrumentation
Credit Hours: 3
Prerequisite: Acceptance to the Surgical Technology program. Introduces the fundamental concepts of surgical instrumentation, including identification, classification, and proper use in the surgical setting. Emphasis is placed on the operation and handling of surgical equipment, as well as the principles of sterile processing within the surgical environment.

SRGT 215 Advanced Surgical Technology Concepts
Credit Hours: 3
Prerequisite: Acceptance to the Surgical Technology program. Builds upon the foundational skills of the surgical technologist with emphasis on intraoperative and postoperative case management.

SRGT 220 Specialty Surgical Instrumentation
Credit Hours: 3
Prerequisite: Acceptance to the Surgical Technology program. Expands upon basic instrumentation knowledge with an emphasis on instrument selection, assembly, and care specific to various surgical specialties while reinforcing aseptic technique, teamwork, and efficiency in the operating room.

SRGT 225 Surgical Technology Introductory Clinical
Credit Hours: 1
Prerequisite: Acceptance to the Surgical Technology program. This introductory clinical course provides structured observation and guided hands-on practice, introducing students to the surgical environment and foundational professional and technical behaviors of the surgical technologist role.

SRGT 230 Surgical Procedures I
Credit Hours: 2.5
Prerequisite: Acceptance to the Surgical Technology program. Introduces commonly performed surgical procedures in core specialties, allowing students to gain foundational knowledge of anatomy, procedural sequencing, instrumentation, and perioperative patient care across multiple specialties.

SRGT 235 Surgical Technology Clinical I
Credit Hours: 4.5
Prerequisite: Acceptance to the Surgical Technology program. Students actively participate in the surgical technologist role under direct supervision, developing core technical skills and professional behaviors while accurately documenting all cases performed.

SRGT 240 Surgical Procedures II
Credit Hours: 2.5
Prerequisite: Acceptance to the Surgical Technology program. Covers surgical procedures in additional specialties, allowing students to expand their foundational knowledge of anatomy, procedural sequencing, instrumentation, and perioperative patient care across multiple specialties.

SRGT 245 Surgical Technology Clinical II
Credit Hours: 4.5
Prerequisite: Acceptance to the Surgical Technology program. Students demonstrate increased independence in the surgical technologist role, refining technical skills and

professional behaviors while accurately documenting all cases performed under direct supervision.

SRGT 250 Surgical Procedures III
Credit Hours: 2
Prerequisite: Acceptance to the Surgical Technology program. Covers surgical procedures in the final group of surgical specialties, allowing students to expand their overall knowledge of anatomy, procedural sequencing, instrumentation, and perioperative patient care across multiple specialties.

SRGT 255 Surgical Technology Clinical III
Credit Hours: 4
Prerequisite: Acceptance to the Surgical Technology program. Students focus on achieving entry-level proficiency in the surgical technologist role with a high degree of autonomy under direct supervision. Students verify all clinical documentation and complete the required minimum of 120 surgical cases.

SRGT 260 Certification Prep and Review
Credit Hours: 1
Prerequisites: Acceptance to the Surgical Technology program. Provides a comprehensive, structured review of all program content to prepare students to sit for the national credentialing examination and demonstrates readiness for entry-level professional practice.

SERVICE EDUCATION (SRVE)

SRVE 101 Emerging Leaders I
Credit Hours: 1
Prerequisite: Consent of instructor. Provides students with opportunities to develop and enhance a personal philosophy of leadership that includes the understanding of self, others, and community, and acceptance of responsibilities inherent in community membership. Involvement in at least one leadership experience is required for the course. A full list of qualifying experiences is provided to all students who enroll.

SRVE 201 Emerging Leaders II
Credit Hours: 1
Prerequisite: Consent of instructor. Continuation of SRVE 101. Provides students with additional opportunities to develop and enhance a personal philosophy of leadership that includes the understanding of self, others, and community, and acceptance of responsibilities inherent in community membership. Involvement in at least one leadership experience is required for the course. A full list of qualifying experiences is provided to all students who enroll.

STUDENT SUCCESS (SS)

SS 104 College Skills
Credit Hours: 3
MOTR Equivalent: MOTR IDSE 101 - Navigating College
Prerequisite: None. Enables students to learn the resources specific to this institution. Emphasis will be placed on self-development, information literacy, and the academic skills necessary for success. These transferable skills become the framework for a student's college experience, while setting the foundation for later career success.

SS 108 Career Choice
Credit Hours: 1
Prerequisite: None. Designed to guide students who may be undecided about a college major or related career plans. Emphasis upon making connections between self and the world of work and between academic and career planning.

SS 114 Computer Skills for College
Credit Hours: 2
Prerequisite: None. Designed to build a foundation of basic computer skills necessary to be successful within an educational setting. Topics include basic computer functions and functional navigation and practical application of Microsoft Word, Microsoft Excel, Microsoft PowerPoint, Internet, email, Experience, and the SFCC learning management system.

SS 120 Employment Strategies
Credit Hours: 1
Prerequisite: None. Designed to help students develop employment search skills and career growth potential.

SS 125 Leadership through Cultural Experiences
Credit Hours: 3
Prerequisite: Consent of instructor. Spring semester only. Students practice various leadership themes and principles to foster interaction in a global society.

SS 225 Problems in Leadership through Cultural Experiences
Credit Hours: 3
Prerequisite: Consent of instructor. Spring semester only. Independent study of a special problem relating to various leadership themes and principles to foster interaction in a global society under the supervision of an instructor in a related discipline.

STEAM EXPLORATIONS (STEM)

STEM 110 STEAM Explorations
Credit Hours: 3
Prerequisites: ENGL 060 and MATH 061 with grades of C or higher or equivalent placement scores. In this course, science, technology, engineering, arts, and math will be taught in an interdisciplinary and applied approach. The course will bridge STEAM content and utilize humanities skills such as critical analysis and communication. This course will lead to an in-depth understanding of STEAM current events and careers in the STEAM industry. The course will culminate with a STEAM project and exploratory learning through place-based education.

TECHNICAL (TECH)

TECH 101 Technical Math
Credit Hours: 3
Prerequisite: None. This course is designed to stress applications of practical problems as they apply to trade. Topics include dimensions, algebraic equations, precision, accuracy and tolerance, fundamentals of trigonometry, plane geometry, solid geometry, and statistics.

TECH 102 Applied Science
Credit Hours: 3
Prerequisite: TECH 101. This course is designed to help students develop a better understanding of physics as it applies to the operation of machinery. Topics include measurement, applied geometry, mechanics, fluids, waves, simple machine, energy and power, heat and temperature, electricity, and magnetism.

THEATRE (THEA)

THEA 107 Introduction to Theatre
Credit Hours: 3
MOTR Equivalent: MOTR THEA 100A – Theatre Appreciation
Prerequisite: None. Introductory hands-on course where students examine the major contributors to the theatrical event: the director, actor, scenic designer, costume designer, and lighting designer. Students will be required to see at least two live theatre productions for which admission may be charged.

THEA 110 Stagecraft and Lighting
Credit Hours: 3
MOTR Equivalent: MOTR PERF 104S - Stagecraft
Prerequisite: None. Basics of set construction, painting, scene design, lighting design, and wood shop safety. Students will be required to spend 30 clock hours outside classroom time with direct involvement in operation of specialized theatre equipment. Required course for speech and theatre majors and minors.

THEA 111 Acting I
Credit Hours: 3
MOTR Equivalent: MOTR PERF 100 – Acting I
Prerequisite: None. Intensive study of the techniques of acting with concentration on bodily movement, balance, diction, voice, and characterization.

THEA 113 Oral Interpretation
Credit Hours: 3
Prerequisite: None. Includes development of the voice as an instrument of expression and analysis and performance of basic interpretive material and forms of literature.

THEA 115 Theatre Practicum
Credit Hours: 1 to 2
Prerequisite: None. Includes student participation in plays, either in performance, production, or backstage work. No more than four credit hours of Theatre Practicum may be applied toward an Associate of Arts degree.

THEA 119 Stage Makeup
Credit Hours: 3
MOTR Equivalent: MOTR PERF 104M – Stage Makeup
Prerequisite: None. Provides a hands-on look at stage makeup. Students will learn the basics of corrective, old age, effects makeup, and what is required in creating a character.

THEA 122 Costume Construction
Credit Hours: 3
Prerequisite: None. Course intends to introduce the student to the field of costume technology through the practical experience in the execution of theatrical costume techniques, basic sewing skills and costume crew.

THEA 125 Theatre History
Credit Hours: 3
Prerequisite: None. Introductory examination of theatre as a living and viable artistic medium. Course examines the historical development of the audience; dramatic literature and structure; and the role of the actors, directors, designers, and technicians.

THEA 128 Introduction to Theatre Design
Credit Hours: 3
Prerequisite: None. Students taking this course will be given the opportunity to identify, analyze and implement the elements of successful theatrical design. In addition, students will be given the opportunity to learn how to evaluate their own personal reactions to a given aesthetic. Students are expected to discuss designs from local shows they see.

THEA 131 Script Analysis
Credit Hours: 3
MOTR Equivalent: MOTR PERF 103SA – Script Analysis
Prerequisite: None. The purpose of script analysis is to examine various methods of analyzing play scripts for performance. Specific emphasis will be placed on the working environment of the actor, director, dramaturg, and designer in examining how a script is produced for a public performance. The course is designed to help students develop tools for use in their profession, not to survey the history of dramatic literature.

THEA 134 Stage Voice and Movement
Credit Hours: 3
Prerequisite: None. A survey and practice of multiple theatre movement and voice theories designed to develop student awareness and skill related to the body's expressive potential.

THEA 180 Problems in Theatre
Credit Hours: 1 to 3
Prerequisite: Consent of instructor. Independent study of a special problem in speech or theatre under the supervision of a fine arts instructor.

THEA 190 Theatre Capstone
Credit Hours: 1
Prerequisite: Consent of program coordinator. This class is designed to put all the things that students have learned together, so they are prepared for the college or university to which they transfer. Acting students will prepare an audition package, and technical students will create a portfolio.

TRIO SKILLS (TSKL)

TSKL 101 TRiO Skills I
Credit Hours: 1
Prerequisite: Consent of TRiO STEPS advisor. Designed to assist incoming freshmen with basic skills needed to orient them to college and necessary for academic success. Emphasis upon basic computer skills, study skills, research skills, critical thinking skills, financial management skills, life skills, confidence building, and career exploration. Course is restricted to students who have been officially accepted into the TRiO STEPS program at SFCC.

TSKL 102 TRiO Skills II
Credit Hours: 1
Prerequisite: Consent of TRiO STEPS advisor. Continuation of TSKL 101. Aimed at assisting TRiO STEPS students who have completed basic skills courses and have moved on to college-level courses. Topics include study skills, research skills, critical thinking skills, financial management skills, time management, life skills, confidence building, and career exploration. Course is restricted to students who have been officially accepted into the TRiO STEPS program at SFCC.

TSKL 103 TRiO Skills III
Credit Hours: 1
Prerequisite: Consent of TRiO STEPS advisor. Continuation of TSKL 102. This TRiO STEPS course will focus on life skills and personal enrichment. Covers topics such as fiscal management, job skills, resume writing, maintaining physical and emotional health, conflict resolution, and stress management. Course is restricted to students who have been officially accepted into the TRiO STEPS program at SFCC.

TSKL 104 TRiO Skills IV
Credit Hours: 1
Prerequisite: Consent of TRiO STEPS advisor. Designed to assist students who are participants in the TRiO STEPS program who are in their final year at SFCC complete the activities required for graduation and to assist them in transferring to the four-year college of their choice. Students in this course will be assisted in completing applications to four-year colleges and in applying for scholarships and financial aid at their transfer institutions. Students will also be assisted in planning financially for completing their baccalaureate degrees, including calculations of manageable student debt load. Campus visits to four-year colleges are provided free of charge to students in the STEPS program. Course is restricted to students who have been officially accepted into the TRiO STEPS program at SFCC.

WEB DEVELOPMENT (WEB)

WEB 103 Introduction to Web Development
Credit Hours: 3
Prerequisite: None. Students will learn the basic skills and technology for making animated web pages and the usage

of hypertext markup language 5 (HTML5). Students will learn to create simple applications for smart devices.

WEB 104 Android Applications
Credit Hours: 3
Prerequisite: None. The Android Studio software is used for the application development of projects. The software is available at no charge with no expiration data. This software has proven to work on Windows and Mac devices. This course will teach the basis of Android development and to create GUI applications.

WEB 105 Apple Development
Credit Hours: 3
Prerequisite: CIS 120 or CIS 155 with grades of C or higher. Students will learn key computing concepts and build a strong foundation in programming using Apple development tools. This course introduces Swift programming and guides students through the iOS app development process, including brainstorming, planning, prototyping, and evaluation. In addition to technical training, students will explore the broader impact of computing and mobile applications on society, economies, and cultures. While full app deployment may not be the goal at this stage, students will gain practical experience designing and simulating apps, helping them grow into responsible and innovative developers for Apple platforms.

WEB 114 Web Scripting
Credit Hours: 3
Prerequisite: None. The use and implementation of client-side scripting languages to create interactive web-based applications. Content will include using JavaScript, VBScript and other scripting languages as appropriate for creating dynamic web applications.

WEB 116 Web Development
Credit Hours: 3
Prerequisite: None. Provides enhanced instruction in the concepts, issues and techniques related to designing, developing and deploying websites. Instruction includes, but is not limited to, learning about HTML5, basic JavaScript, responsive Web pages, and the use of cascading style sheets (CSS). Students will learn the process for image mapping, hyperlinking, and embedding active content.

WEB 117 Advanced Web Development
Credit Hours: 3
Prerequisite: WEB 116 with a grade of C or higher. Course gives instruction in the creation of dynamic web pages through a variety of formats. These methods may include, but are not limited to, hypertext preprocessor (PHP), structured query language (MySQL), active server pages (ASP), extensible markup language (XML), ColdFusion, and file transfer protocol (FTP).

WEB 118 Digital Imaging
Credit Hours: 3
Prerequisite: None. Provides extensive instruction in the creation and manipulation of images through the software package Adobe Photoshop. Course is aimed at the Photoshop beginner who wants to create sophisticated graphics for both print and web. Special emphasis on tools, selections, masking, photo treatment and design will be discussed.

WEB 119 Digital Illustration
Credit Hours: 3
Prerequisite: None. Adobe Illustrator is one of the most popular and powerful digital tools used by artist and graphic designers who are working with vector-based art. Everything from logos all the way to full-blown illustrations can be created. The content in this course will provide the background and knowledge to work with key concepts including artboards, workspaces, layers, and shapes.

WEB 120 XML
Credit Hours: 3
Prerequisite: None. Instruction includes learning to use and implement XML standards in web page creation. XML is a language for storing and delivering information on the web. Basic concepts of XML along with delivery methods for developing dynamic HTML documents that maximize the use of browser capabilities will be taught.

WEB 160 Portfolio Design
Credit Hours: 3
Prerequisite: None. Instruction in designing a professional, informative and effective DVD portfolio that highlights the experience and knowledge gained from courses taken at SFCC. Design focuses on, but is not limited to, projects created in the CIS and WEB program courses. This DVD portfolio will be used so prospective employers can gain a better understanding of the student's technical skills and the subject matter learned.

WEB 175 Web Development Internship
Credit Hours: 4
Prerequisite: Consent of program coordinator. Provides on-the-job work experience in web development. Supervised and evaluated by the instructor.

WELDING (WELD)

WELD 114 Structural Layout and Fabrication
Credit Hours: 3
Prerequisites: WELD 116, WELD 120 and WELD 126 with grades of C or higher. Topics include whole numbers, number systems, dimensions, measurement, fractions, volume, weight, precision, accuracy, and percentages. In addition to teaching basic math concepts, the problems will give students a preview of the types of welding-related situations they will face in a work environment. Students will develop solid troubleshooting skills that will serve them throughout their careers as welders. (1 lecture, 2 lab)

WELD 116 Print Reading for Welders
Credit Hours: 3
Prerequisite: None. Study of symbols including AWS and ISO industry standards, measurement systems, terminology, and prints and diagrams associated with work performed by welders in the welding industry, Course includes reading basics prints, math and measurements, welding processes, types of welds and joints, welding symbols, shop drawings, assembly drawings, detail drawings, auxiliary views, detail views, projections, and sections.

WELD 120 Shielded Metal Arc Welding I
Credit Hours: 3
Prerequisite: None. Basic course includes instruction on entry-level skills and knowledge to: identify and set-up the types of Shielded Metal Arc Welding (SMAW) equipment; identify types and specifications of SMAW electrodes; set up and perform fillet and groove SMAW welds on carbon steel in flat, horizontal, vertical, and overhead positions. Covers the American Welding Society (AWS) D1.1 Structural Welding Code and related AWS SENSE Level 1 competencies. (1 lecture, 2 lab)

WELD 122 Shielded Metal Arc Welding II – Structural
Credit Hours: 3
Prerequisite: WELD 120 with a grade of C or higher. Intermediate course includes instruction on out of position groove welding on plate with shielded metal arc welding. Covers the American Welding Society (AWS) D1.1 Structural Welding Code and prepares student for AWS SENSE Level 1 welder performance qualification test. (1 lecture, 2 lab)

WELD 124 Shielded Metal Arc Welding III – Pipe
Credit Hours: 4
Prerequisite: WELD 122 with a grade of C or higher. Advanced course includes instruction on out of position groove welding on welding of pipe using the shielded metal arc process in all positions. American Welding Society and the American Society of Mechanical Engineers (ASME) – Section 9 code for pipe welding with ASME welder qualification included. Prepares student for the AWS SENSE Level 2 welder performance qualification test. (1 lecture, 3 lab)

WELD 126 Gas Metal/Flux Core Arc Welding I
Credit Hours: 3
Prerequisite: None. Basic course includes instruction on entry-level skills and knowledge to: identify and set-up the types of Gas Metal Arc Welding (GMAW) and Flux Core Arc Welding (FCAW) equipment; identify types and specifications of GMAW/FCAW electrodes; set up and perform fillet and groove GMAW/FCAW welds in flat, horizontal, vertical, and overhead positions. Covers the American Welding Society (AWS) D1.1 Structural Welding Code and related AWS SENSE Level 1 competencies. (1 lecture, 2 lab)

WELD 128 Gas Metal/Flux Core Arc Welding II – Structural
Credit Hours: 3
Prerequisite: WELD 126 with a grade of C or higher. Intermediate course includes instruction on out of position groove welding on plate with gas metal arc welding and flux core arc welding. Covers the American Welding Society (AWS) D1.1 Structural Welding Code and prepares student for AWS SENSE Level 1 welder performance qualification test. (1 lecture, 2 lab)

WELD 132 Gas Tungsten Arc Welding I
Credit Hours: 2
Prerequisite: None. Basic course includes instruction on entry-level skills and knowledge to: set up Gas Tungsten Arc Welding (GTAW) equipment; select correct electrodes and perform welds on carbon steel in flat, horizontal, vertical, and overhead positions. Prepares student for the AWS SENSE Level 1 welder qualification test. (1 lecture, 1 lab)

WELD 134 Gas Tungsten Arc Welding II
Credit Hours: 3
Prerequisite: None. Intermediate course includes instruction on welding aluminum and stainless steel with Gas Tungsten Arc Welding (GTAW) equipment. Prepares student for AWS SENSE Level 1 welder performance qualification test. (1 lecture, 2 lab)

WELD 136 Gas Tungsten Arc Welding III
Credit Hours: 4
Prerequisite: WELD 132 or WELD 134 with a grade of C or higher. Advanced course includes instruction on Gas Tungsten Arc Welding (GTAW) on pipe. Prepares student for the AWS SENSE Level 2 welder performance qualification test. (1 lecture, 3 lab)

WELD 160 Advanced Pipe Fitting and Structural Fabrication
Credit Hours: 4
Prerequisites: WELD 114, WELD 122, WELD 128 with grades of C or higher and MATH 107 or equivalent placement score. An advanced, comprehensive class designed to put the skills obtained in the areas of welding, print reading, layout, and shapes to practical use and provide additional instruction on welding fabrication, weldments and fixtures. Upon completion students will be able to fabricate a metal weldment using layout methods, prints and a weldment fixture. (1 lecture, 3 lab)

WELD 163 CNC Plasma Cutting
Credit Hours: 2
Prerequisite: EDT 111 or EDT 130 with a grade of C or higher. Basic course includes instruction on numerical control software and programming. Students will: write several programs; use computer aided drafting (CAD) to communicate with the plasma cutting system; program and cut two-dimensional parts; and learn how to troubleshoot the equipment for problems.

WELD 175 Welding Internship
Credit Hours: 3
Prerequisite: Program Coordinator Approval. Application of work skills in a supervised work environment. Companies that sponsor internships provide the supervision. The college provides general guidance and works with the sponsoring company in developing an outline of the work experiences unique to the site. Course is designed to provide the student an opportunity to demonstrate work skills, work ethics, and the ability to work with others. It is the student's responsibility to identify a company and establish the internship. Instructors may assist as needed.

WELD 180 Current Topics in Welding
Credit Hours: 1 to 8
Prerequisite: Consent of program coordinator. Independent study of a special topic in welding under the supervision of a welding instructor.

WELLNESS (WELL)

WELL 102 Wellness for the Individual
Credit Hours: 2
MOTR Equivalent: MOTR IDSE 102 – Wellness for the Individual
Prerequisite: None. Wellness for the Individual will allow students to learn how to ensure they are working towards a healthy approach to life both physically and mentally. This survey course will examine the anatomy and body systems required for physical wellness, along with dietary choice and behaviors. Coping strategies will be explored to prepare students to remain healthy despite challenges in their lives.

WELL 116 Building Fitness for Life I
Credit Hours: 1
Prerequisite: None. Course offers a comprehensive plan for utilizing fitness training as a means to lifetime wellness. Students explore nutritional needs, stress management and prevention of disease.

WELL 117 Building Fitness for Life II
Credit Hours: 1
Prerequisite: WELL 116. Course expands the student's knowledge and ability to develop a comprehensive plan of lifetime wellness utilizing fitness training.

WELL 121 Women and Health
Credit Hours: 1
Prerequisite: None. Designed to provide students with the tools to improve a woman's health status. Historical trends in health care regarding women are discussed as well as methods for facilitating change. Personal choices and their effects on health and wellbeing are identified. Topics include, but are not limited to, reproductive and gynecological concerns, nutrition, exercise, weight loss, bone health, women's concerns, heart disease, sexuality, and abuse.

WELL 122 Applied Wellness
Credit Hours: 1
Prerequisite: None. A different type of physical education activity course that can be enjoyed by any or all students regardless of age or physical condition. Designed to provide students with theoretical and practical experiences focusing on the relationship of lifestyle to productivity and quality of life.