

CROWDER COLLEGE

Course Catalog 2021-2022

***Established by the Community College District
of Newton-McDonald Counties, 1963***

Version 1.04

Neosho (Main Campus)

601 Laclede, Neosho MO 64850
Admissions 1-866-238-7788 (toll-free)
(417) 451-3223, Main Campus Switchboard

Cassville Instruction Center

4020 North Main Street, Cassville MO 65625
Phone: (417) 847-1706 Fax: (417) 847-1367

McDonald County Instruction Center

194 College Road, Pineville MO 64856
Phone: (417) 226-6000 Fax: (417) 226-6009

Nevada Instruction Center

600 West Edwards Place, Nevada MO 64772
Phone: (417) 667-0518 Fax: (417) 667-0536

Webb City Instruction Center

600 S. Ellis, Webb City MO 64870
Phone: (417) 673-2345 Fax: (417) 673-2300

Crowder College also offers classes at the following training center:

Joplin

Advanced Training & Technology Center (ATTC)
402 Grand Ave, Joplin MO 64801
(417) 680-3202 or (417) 592-2940

An Equal Opportunity/Affirmative Action Institution

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The information in the catalog was accurate at the time of publication. The College reserves the right to make changes affecting policies, fees, curricula or any other matters cited in the catalog. The College will give reasonable and adequate notice to students to allow time to adhere to any changes in the catalog. Fees, deadlines, academic requirements, courses, degree programs, and other matters described in the catalog may change with reasonable notice. Not all courses are offered each academic year and faculty assignments may change without notice. For most recent information please consult the online version of the catalog:

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AN INTRODUCTION TO CROWDER COLLEGE

Crowder Mission & Vision

Crowder College: Building a civil, serving, literate, learning community of responsible citizens. Crowder College provides a student-centered learning environment where all students have the potential to become success lifelong learners and productive members of the community. In a climate of intellectual freedom, Crowder College strives to develop each individual's ability to master the content of learning, interact constructively with people from diverse backgrounds, consider differing viewpoints, exhibit ethical behaviors, and serve their communities.

Academic Integrity

Crowder College is built on a foundation of academic integrity. The Crowder College Board of Trustees, faculty, and staff have developed nine *Student Abilities* that are advanced across the curriculum. One of these Student Abilities is Ethical Decision Making. Ethical Decision Making is "the selection of courses of action in accordance with principles or standards of right or good conduct." An academic community assumes the standards of right or good conduct also apply to school work. The most common forms of academic dishonesty are cheating and plagiarism. Examples of cheating and plagiarism are provided in this policy as a means of helping to define expectations. The examples are not exhaustive and should not be viewed as such.

CHEATING

Cheating is defined as obtaining or attempting to obtain, or aiding another to obtain credit for work, or any improvement in evaluation of performance, by any dishonest or deceptive means. Cheating may include:

- obtaining a copy of an examination before it is given.
- using a personal electronic device not allowed by the instructor.
- collaborating with others on assignments without the consent of the instructor.
- collaborating with others to enable cheating.
- having another person take an exam for you.
- fabricating information such as data for a lab report.

- submitting material that is not yours as part of your course performance.
- communicating with anyone other than a proctor or instructor during an exam.
- sharing your assignments or exams with other students.
- writing a paper for another student.

Penalties for cheating are as follows: first offense, a grade of zero on the assignment; second offense, failing grade in the class where the second offense occurred; third offense, suspension from Crowder College.

PLAGIARISM

Plagiarism is the use of another person's words or ideas without giving that person appropriate credit. Academic work is evaluated on the assumption that the work presented is the student's own. Plagiarism may include directly quoting the words of others without proper credit given to them and/or without using quotation marks or other accepted notations to identify the borrowed words. Plagiarism can also be simply using any prior work produced by the student for another course without prior approval from the current instructor.

Types of actions defined as plagiarism:

- Using a direct quote from a source and not using quotation marks, in-text citation, and reference.
- Paraphrasing a source and not using in-text citation and reference.
- Submitting papers, assignments, or exams that were completed by another student, or arranging for another person to complete your assignments for you.
- Selling or purchasing (or copying) papers, assignments, or exams from any website that buys or sells them. This also applies if only partially used in student submission.
- Citing a source with fake bibliographical information.
- Submitting a paper, assignment, quiz or exam that you submitted in a previous and/or concurrent class without requesting and receiving in writing prior permission from your instructor(s). This also applies to "revising" papers, assignments, quizzes or exams that were previously submitted in any course where credit was received or any course

which was previously failed or from which you withdrew, even if it is the same course as your current registration.

- Copying an image, audio, video, spreadsheet, PowerPoint presentation, etc., without proper citation and reference.
- Working in a group effort without prior written faculty consent.
- Altering any information on forms or emails after the original has been submitted.
- Using or disseminating materials to third-party websites that buy or sell course work

Penalties for plagiarism are as follows: first offense, a grade of zero on the assignment; second offense, failing grade in the class where the second offense occurred; third offense, suspension from Crowder College.

Academic Philosophy

Crowder College believes all students have the potential to learn, grow, become successful lifelong learners and be productive members of the community. Servant Leadership, the cornerstone principle of the Robert K. Greenleaf Center, is highly valued and routinely modeled. In a climate of intellectual freedom, Crowder College strives to develop each individual's ability to master the content of offerings, make ethical decisions, develop analytical skills, cultivate physical health and well-being, foster self-worth, and learn the value of working together while serving others.

College Philosophy

The Crowder College family lives by the principles of servant leadership. The faculty and staff believe modeling leadership through service creates an environment of academic excellence and encourages our students to lead by serving in their communities.

General Education Philosophy

General Education core requirements will prepare Crowder College students for a life of critical thinking, foundational knowledge, effective communication, and informed action. Students should learn to interact constructively with people from diverse backgrounds, to understand differing viewpoints, and to identify and resolve ethical issues. The General Education core classes help students to become responsible participants in a democratic society and to meet changes and challenges in their personal, social,

educational, and professional lives.

The General Education Core is composed of six category areas consisting of Communications, Humanities, Mathematics, Physical Education, Science, and Social and Behavior Sciences. The philosophy statements for those categories are as follows:

Communications

Crowder College recognizes and understands the central role that communication plays in both learning and life. We focus our communication course offerings on teaching the principles of clear and effective oral and written communication and provide opportunities to practice and refine these principles and skills. Our goal is for students to be able to listen effectively and write and speak with clarity, coherence, cogency, and ethical integrity.

Humanities

The humanities study aspects of human culture and how people process and document the experience. Humanistic methods are used to study philosophy, literature, religion, fine arts, history, language, and other humanistic content. These courses are included in Crowder College's core curriculum to expand students' knowledge of human cultures or conditions in relation to behaviors, ideas, and values expressed in works of imagination and thought.

Mathematics

Mathematics is a discipline that seeks to understand the patterns and structures of the world around us through logical thinking and reasoning. The goal of courses under the category of Mathematics is for students develop the ability to think creatively, critically, strategically, and logically. The students learn to structure and to organize, to carry out procedures flexibly and accurately, and to process and communicate information. Students can then use these abilities to effectively problem solve in a variety of contexts.

Physical Education

Physical Education provides the opportunity to teach students about movement, teamwork, problem solving, and health related fitness. Exposing students to various physical activities builds social, emotional, intellectual, psychomotor, and cognitive skills. Physical Education classes teach the importance of physical activity for the general well-being of students and help instill a positive attitude toward a healthy,

physically active lifestyle.

Science

Scientific knowledge, the process of scientific inquiry, and the values of honesty and integrity in science are fundamentally important to the well-being of humanity and the well-being of the greater natural world. The science departments at Crowder College believe an education that teaches these core scientific principles, as well as general knowledge in each specific discipline, is an important tool in helping our students become better citizens. All the many branches of science are unified by these core principles. The goals of our general education courses in the sciences are for our students to comprehend and apply these basic principles and general knowledge in their thoughts and their actions.

Social & Behavioral Sciences

Social and Behavioral Science courses are dedicated to understanding human behavior through an examination of our mind, our society, and our history. Students are prepared for an increasingly interconnected world made up of a diverse and ever-changing population. These courses assist students in obtaining career goals, developing interpersonal relationships, contributing to their community, and functioning as citizens in society. Crowder College seeks to help students develop a deeper understanding of the relationship of self and society through the investigation of cultural, economic, political, religious, and social influences that shape human ideals and behaviors.

Affiliation and Accreditation

Crowder College is accredited by the Missouri Department of Elementary and Secondary Education and the coordinating Board for Higher Education. The College is also fully accredited by the Higher Learning Commission, a member of the North Central Association. *The Higher Learning Commission, 30 North LaSalle Street, Suite 2400, Chicago, Illinois 60602 -2504 Phone: (312) 263-0456.*

Graduates of the Associate of Arts programs are admitted without examination to junior standing in all public universities and colleges in Missouri and many outside the state of Missouri. Crowder is an active member of the Missouri Community College Association and the American Association of Community Colleges.

The following degree programs have obtained

accreditation, are in the process of receiving accreditation, or participate in approved curriculum:

Auto Technology – National Automotive Technicians Education Foundation (NATEF) and the Society of Automotive Excellence (ASE), Expires November 2021

Computer Networking – Active Participation with Cisco Certified Academy through Cisco Systems since 2001

Nursing – Missouri State Board of Nursing, Accreditation Commission for Education in Nursing (ACEN)

Occupational Therapy Assistant – Accreditation Council for Occupational Therapy Education (ACOTE)

Paramedic – Committee on Accreditation of Educational Programs for Emergency Medical Services Professions (CoAEMSP), Expires January 2023; State of Missouri, Bureau of EMS Division (BEMS)

Veterinary Technology – American Veterinary Medical Association (AVMA), Expires 2022

Welding – Participation in the American Welding Society's SENSE (Schools Excelling through National Skills Standards Education)

Institutional Learning Outcomes

Four "Institutional Learning Outcomes" have been identified from the Crowder College Mission Statement. Faculty are expected to teach beyond academics and basic skills to ensure that students develop abilities in these areas. The definitions for these ILO's are as follows:

- COMMUNICATION AND INFORMATION LITERACY SKILLS (C1)

Students will be able to demonstrate the ability to express ideas and information effectively and disseminate appropriate information.

- CRITICAL THINKING AND PROBLEM SOLVING SKILLS (C2)

Students will be able to gather and synthesize relevant information, evaluate alternatives, and implement creative and effective solutions.

- CIVIC RESPONSIBILITY AND ETHICAL REASONING SKILLS (C3)

Students will be able to understand and articulate the various perspectives of ethical issues and understand ways they can exercise responsible citizenship in response to their learning.

- COLLABORATION SKILLS (C4)

Students will be able to apply leadership principles and strategies to enhance personal and professional growth and demonstrate teamwork skills that enable collaboration.

ADMISSION

General Admission Requirements

Individuals who submit the following documents:

1. Application for admission with the required \$25 application fee.
2. All high school and college transcripts (see transcript policy).
3. Certificate of home school completion or certificate of high school equivalency.

A student is not permitted to enroll for or accumulate more than six (6) credit hours until s/he graduates from high school or completes a home school program or a high school equivalency exam (unless eligible for Dual Credit and Dual Enrollment Admission).

Students wishing to enter a program leading to a field that requires a license or certification should be aware that certain criminal convictions may restrict the individual's ability to obtain professional licensure or certification.

Prior criminal convictions or pending criminal charges do not exclude admission to the College, although admission may be deferred or denied to individuals whom the College considers to be a potential danger to the safety, security, and educational environment of the College. In order to fully evaluate applicants, to help foster a safe learning environment, and to comply with applicable law regarding financial aid, the College requires those applicants who have been convicted of certain crimes or who have pending criminal charges, to disclose this information at the time of application or reapplication. Failure to disclose a criminal conviction or pending criminal charge may result in the student being immediately withdrawn from current classes and may result in disciplinary action including dismissal or expulsion, as outlined in the Student Code of Conduct. Applicants may also be restricted from living in the college residence halls.

College Orientation (COLL 101)

Degree and certificate seeking students must complete COLL 101, in their first semester at Crowder, if

required by the degree or certificate they have declared. Non-degree seeking students are not required to take COLL 101. However, if students become degree or certificate seeking and the degree or certificate requires the class, they will be required to successfully complete the course. Transfer students who have successfully completed an equivalent college orientation class at another institution or have a cumulative grade point average of 2.0 on a minimum of 12 credit hours earned after high school graduation are exempt from COLL 101. The course is designed to acclimate new students to the Crowder College environment, provide them with information they will need to function as a Crowder College student, and encourage further evaluation of their character. Recommend taking course on ground.

Dual Credit/Dual Enrollment Admissions

Admission is granted to high school students, grades 9-12, who are not older than 21. Dual credit and dual enrollment (definitions on page 12) students are eligible to enroll in college courses as long as they meet the following criteria:

- Juniors and seniors with an overall minimum grade point average of 3.0 (on a 4.0 scale) and written permission from the parent/legal guardian are automatically eligible for college courses.
- Juniors and seniors with an overall grade point average between 2.5 – 2.99 (on a 4.0 scale) must provide written permission from a parent or legal guardian, and provide a signed letter of recommendation from their principal or guidance counselor.
- Sophomores with an overall minimum grade point average of 3.0 (on a 4.0 scale) must provide written permission from the parent/legal guardian, and a signed letter of recommendation from their principal or guidance counselor.
- Freshmen with an overall minimum grade point average of 3.0 (on a 4.0 scale) must provide written permission from a parent or legal guardian, and provide a signed letter of recommendation from their principal or guidance counselor. Freshmen must further demonstrate their competency by scoring at the 90th percentile or above on the ACT or SAT.

(Dual credit student eligibility requirements are mandated by MDHE).

In addition, students must meet the same

requirements for placement into individual courses, (e.g., English or mathematics) as those required of all Crowder students. Dual credit and dual enrollment students must also be in compliance with all other college policies and will not be eligible to receive any form of Title IV financial aid. Only students who can provide a valid social security number are permitted to enroll in classes through Crowder College.

Interested students need to submit the following documentation:

1. Dual Credit/Dual Enrollment Application for admission
2. Copy of high school transcript to verify GPA
3. Completed enrollment form
4. Parent/Legal Guardian consent form
5. Letters of recommendation (if applicable)
6. Placement scores (if applicable)

International Student Admissions Required Documentation

To complete the International Admissions Process:

1. Application for Admissions – The application must be completed online, in English, and the application fee of \$50 must be paid.
2. Current Passport – Scanned copy of current passport must be provided.
3. High School Transcript – Copy of the high school transcript, completion certificate, or leaving certificate must be provided. These documents must be officially translated through a translation company. We recommend that you use World Education Services (WES) for this service.
4. College Transcripts – College Transcripts (in which credits were earned) must be provided in English. World Education Services (WES) should be utilized for translation to English is needed.
5. Financial Statement – Completion of the Financial Support Application provided upon successful application submission. Financial support documents (bank statements or letters and a sponsor letter) providing proof that money exists to pay for the first year of classes. Proof of adequate funds for the duration of study should also be included.
6. Housing – Housing accommodations, on-campus or off-campus, must be secured prior to student acceptance. Check out our Student Housing

options to submit your Housing Application and the deposit if you plan to reside in one of our housing facilities. If you do not plan to live in one of our facilities, please advise the International Program Coordinator as to where you will be living.

7. Insurance – All international students are required to have health insurance that includes medical evacuation, repatriation, and sport related injuries. Students will be required to purchase insurance through the college OR provide proof of insurance and sign a waiver of the coverage available through the college each semester in the US (including summer).
8. Placement Test – Each student will complete a placement exam upon arrival. This exam is administered on the Crowder College campus. Results of the exam will be evaluated and supplemental instruction may be required. Student will be placed in classes based on the exam results.
9. Make sure that you have payment arrangements in order for your financial costs as they will be required within the first week of classes in US Dollars. Payment can be made with credit card, debit card, or cash. All students enrolled in the payment plan are subject to the payment plan rules.
10. You will need to pay an Emergency Travel Deposit in the amount of \$1,500 or provide proof of purchase for an open-ended, round-trip ticket (copy of ticket may be submitted to the International Office).
11. If accepted, you will be expected to arrive at least three (3) days prior to the first day of the semester. You will go through placement testing, enrollment of classes, and orientation during this time.

The form I-20 will be issued after numbers 1-6 are on file and the student has been accepted for study at Crowder College. An Acceptance Letter and a letter for your Embassy will be issued to the student upon acceptance. To check on the status of your application you may contact the International Program Coordinator through email at international@crowder.edu for more information.

After receipt of your I-20 and acceptance documents you must complete the following: SEVIS FEE payment (prior to your VISA interview) and completion of your

VISA interview at your Embassy.

Please NOTE: For more student VISA information please visit the United States Citizenship & Immigration Services website.

Transcript Policy

All students must submit an official transcript prior to or upon submitting application for enrollment. Unofficial transcripts will be accepted for one semester only. Students without an official transcript on file by the end of the fourth week of classes will receive a records hold on their account. Students requesting financial aid will not be eligible to receive aid for the current or subsequent terms without an official transcript on file. Transfer, degree and non-degree seeking students that do not meet the satisfactory progress standards must adhere to the Suspension Appeal policy and procedures. All students on suspension status must submit a petition for readmission to the Records Office.

Transfer Student Admissions

A student who has attended another college or university before enrollment at Crowder must provide proof that s/he was in "Good Academic and Disciplinary Standing" at the last college attended. Students with a transfer grade point average that does not meet the Crowder guidelines for Satisfactory Academic Progress will be placed on Academic Probation. Students on Academic Suspension from a previous institution will be required to meet the Crowder standards for Satisfactory Academic Progress before being allowed to enroll for classes (see Student Progress Policies). Students who are not in good disciplinary standing will be required to appeal in order to enroll for classes.

SPECIAL ADMISSION PROGRAMS

Practical Nursing

1. Must have a valid high school diploma or equivalent (such as GED or HiSet)
2. Completed the TEAST pre-entrance examination
3. Have a good moral character as evidenced by references
4. Verify a criminal background check free of Class A or B felony

5. Enroll in Family Care Safety Registry and not be on the Employee Disqualification List
6. Have adequate finances to complete the program and reliable transportation
7. Maintain the ability to perform required functional abilities
8. Eligibility to write the Licensure exam as described in Missouri Nursing Practice Act section 335.066 completion of the program does not guarantee eligibility.

Registered Nursing

The Crowder College Registered Nursing program prepares graduates who can demonstrate entry level competencies as registered nurses, and provides a foundation for continued learning. The program provides a multiple entry program where licensed practical nurses can enter with advanced standing or students may enter with no previous nursing education. Further information is available from the Crowder College Nursing Department, (417) 455-5554.

Application requirements for all registered nursing students are as follows:

1. Be approved for admission to Crowder College
2. Be at least 19 years of age by completion of the program
3. Have a high school diploma or high school equivalency certificate
4. Have Certified Nurse Assistant, RMA, CMA or certification or EMT paramedic licensure prior to start of registered nursing classes.
5. Have a minimum GPA of 2.75 on required general education courses
6. Have a minimum ACT composite score of 19
7. Eligibility to write the Licensure exam as described in the Missouri Nursing Practice Act section 335.066; completion of the program does not guarantee eligibility
8. Generic students must have completed Anatomy and Physiology I with a C or better and have a current CNA or EMT Certificate
9. LPN Bridge students must have completed Anatomy and Physiology I, II, and Microbiology to be eligible for admission prior to start of registered nursing classes.
10. Complete application by deadline

Occupational Therapy Assistant

The Crowder College Occupational Therapy Assistant Program (OTA) prepares graduates to demonstrate as an entry level practitioner and sit for their board certification exam. Further information is available from the Allied Health Department, (417) 673-2437. Application requirements for all OTA students are as follows:

1. Be approved for admission to Crowder College
2. Complete pre-admission courses with a C or better
3. Have a minimum GPA of 2.5 on required general education courses
4. Complete application requirements
5. Eligibility to sit for the NBCOT (National Board of Certification Occupational Therapy) exam

Veterinary Technology

The Crowder College Veterinary Technology Program is a 78 credit hour program which is fully accredited by the American Veterinary Medical Association (AVMA) and prepares students for careers as veterinary technicians. This is a selective admission program. Applications are accepted until the last Friday in March for the class which begins the following August. An ACT test result must accompany the application. Students must complete a minimum of BIOL 101 or BIOL 110, MATH 50 (or appropriate placement), ENGL 100 (or appropriate placement), and LOC 50 (or appropriate placement), and have worked with or observed a licensed veterinarian in practice for a minimum of 40 clock hours to be eligible for the program. To be licensed as a Registered Veterinary Technician in Missouri, a student must be at least 19 years of age, graduate from an AVMA accredited program, pass the Veterinary Technician National Examination, and pass the Missouri State Veterinary Medical Board Examination. An applicant must be approved by the Missouri State Veterinary Medical Board, or the State Veterinary Medical Board of any other state in which the student wishes to be licensed, before being allowed to sit for these examinations. For more information call 417-455-5772.

ASSESSMENT AND PLACEMENT

College Entrance and Placement Testing

To facilitate student success at Crowder College, the

following guidelines have been established for enrollment in Crowder courses. Crowder College will accept the ACT and other standardized test scores for college-level placement. If a student's scores are below the required levels, s/he must take the placement test for placement purposes.

The placement test is a test for students enrolling for an English or mathematics class and to determine reading level for online courses and certain reading-intensive courses. The scores on this test are used to enroll students in appropriate levels of English, mathematics, reading, or other courses, which require a minimum score for placement. The Crowder College application fee covers the cost of the first attempt of the test. A fee will be charged for retakes. The range of scores for placement in other identified courses is available in the Student Success Center (SSC) and Testing Center. Assessment and placement guidelines have been developed, after careful consideration, to promote the greatest level of individual student success.

Students who are required to enroll in a college preparatory class (a class numbered less than 100) must maintain a grade of C or better in each of the prescribed courses in order to continue with college level coursework. Crowder College placement exams are required of all first time students who are seeking a degree, enrolling for 7 credit hours or more, or enrolling for a course that has a placement requirement. Transfer students who have not completed their freshman requirements in English and/or math will be required to take the Crowder College placement exams or provide adequate scores. Students who have completed 6 hours will be required to take placement exams prior to enrolling in additional coursework.

The placement exam is for "placement" only. To better align Crowder College with testing regulations, a student has the option of one retake per section, per 12-month period of the placement test (Math, Reading, and Writing). Crowder College will honor the highest placement score achieved for placement in prerequisite courses for enrollment of the following semester. If a student wishes to "test out" of a class, the CLEP test is the more appropriate choice (for English or Math). Contact the Testing Center for CLEP and Testing Out opportunities.

A student cannot retake a section on the same day a test was administered. It is the experience of Testing Center that nothing is gained by immediate retakes.

This however, can be appealed to the Testing Center or designated personnel at off-campus sites if dire need is demonstrated for an immediate retake.

Students may call the Testing Center at (417) 455-5433 or visit www.crowder.edu for complete placement exam information and instructions. Additional placement exam guidelines are available for review in the Testing Center, or on the Crowder website.

Advanced Placement

High school graduates participating in the College Board Advanced Placement Program and passing the final examinations with a score of 3, 4, or 5 in the following areas will receive credit for these subjects:

<u>Class</u>	<u>Credit for:</u>
Biology	BIOL 101
Calculus AB	MATH 150 & 160
Calculus BC	MATH 202
Chemistry	CHEM 111
Computer Science.....	COMP 111
Econ: Macro.....	ECON 201
Econ: Micro.....	ECON 202
English Lang & Comp	ENGL 101
English Lit & Comp.....	ENGL 101
.....	& ENGL 109
Human Geography.....	GEOG 101
Political Science	PLSC 103
Psychology	PSYC 101
Spanish Language	SPAN 101
US History	HIST 106

College Level Exam Program (CLEP)

Students who have taken CLEP tests and wish to receive credit must have scores at the 50th percentile or higher on Subject Matter exams. The College does not grant credit for the CLEP General Examinations. Credit is given only in course areas offered as part of the normal college curriculum. Financial aid is not available.

Students wishing to take CLEP exams may obtain information through the Testing Center (417) 455-5433.

Crowder College is a limited testing center.

Military Service and Training

Students with two years of verifiable active military duty will automatically be granted two (2) hours of Physical Education and two (2) hours of Health and Hygiene. Other military coursework will be evaluated individually through interviews and submission of certificates documenting successful completion.

Credit is normally granted for military coursework that has a course equivalent at Crowder College and is appropriate to the student’s major. Students interested in having military coursework evaluated should contact the Records Office located in Student Affairs.

Testing Out (Credit by Examination)

Credit may be granted in selected courses to entering freshmen and other students who pass appropriate departmental examinations. Students wanting to TEST OUT of a class and do so before the class begins will be charged a \$50 assessment fee. Students who pass the test at the level designated by the department in which the test is taken will be given credit for the class. Students not passing at the designated level will not receive credit and the \$50 fee is non-refundable. Students who are currently enrolled in a class and attempt to test out during the semester will still be required to pay regular tuition for that class. Scholarships do not cover tuition for credit earned through testing out.

STUDENT
CLASSIFICATIONS

Degree Seeking Students

A student who has satisfied all admission requirements and is enrolled as seeking a degree or certificate.

Dual Credit/Dual Enrollment Students

Dual credit refers to college level courses taught by approved, college-qualified, high school instructors to high school students who are earning both high school credit and college credit for these courses simultaneously.

Dual enrollment refers to students concurrently enrolled in high school and at a post-secondary institution. Dually enrolled students attend classes online or at any Crowder College campus location and earn college credit. However, they may or may not earn high school credit.

International Students

A student that is a non-resident (non-immigrant) alien attending college with the purpose of returning to their homeland once their education is complete. This does not define tuition status.

Lifetime Learner Students

Students who graduated from Crowder College before 2000 with an Associate of Arts, Associate of Applied Science, or Associate of Science degree are granted a tuition waiver for one class (up to five credit hours) per semester. Students who graduated in 2000 or after are granted a tuition waiver for one class (up to three credit hours) per semester. Lifetime Learner students will be responsible for books, institutional support fees, safety and security fees, online course fees, lab fees, flex fees and any other fees associated with the class. The Lifetime Learner Waiver applies only to standard in-district or out-of-district tuition rates and is not applicable toward Community Education classes or special programs.

Military Duty Activation

In the event that a student in the Armed Forces, National Guard, or Reserves is called to active duty while enrolled at Crowder College and the student submits a copy of their military orders to the Records Office, the student shall be granted a 100% refund of tuition and fees for all classes from which the student withdraws.

The student should work closely with their faculty to develop strategies to complete any or all courses successfully within the time-line provided. If circumstances are such that it is not possible to complete any of the courses, then the student may withdraw from any or all courses with a full refund of tuition, facilities use fees and lab fees.

Non-Degree Seeking Students

A student who has satisfied enrollment requirements but has not enrolled as one seeking a degree or certificate. A non-degree seeking student must comply with all other college policies, including placement testing for English and math courses. Regardless of semester hours accumulated, the student will not be granted a degree or certificate until he or she declares a major, files for a graduation check, pays applicable graduation fees and takes the exit exam. Non-degree seeking students are not eligible for financial aid.

Senior Citizen Students

Students age 65 or older before August first of the school year who reside in the state of Missouri and are otherwise eligible to attend will be granted a senior citizen tuition waiver. A student receiving a senior citizen tuition waiver will take all tuition-free courses

on a non-credit basis and must satisfy all course prerequisites of the institution. Student will not be eligible for financial aid. Students are responsible for books, institutional support fees, security fees, online course fees, lab fees, and any other applicable fees. The tuition waiver applies only to standard in-district or out-of-district tuition rates and is not applicable toward Community Education classes or special programs. (*Per Missouri Revised Statute Chapter 173.091.1-.6.*)

Students who wish to take courses for credit must pay for such courses and are responsible for all tuition and fees. Other forms of financial aid may apply.

DEGREE CLASSIFICATIONS

Associate of Arts Degree (AA)

The degree requirements are listed in the catalog. This degree is usually earned by students who concentrate in liberal arts or business courses on the college transfer level.

Associate of Science Degree (AS)

The degree given to students who have completed the requirements listed in the catalog. Associate of Science degrees have been developed for transfer to specific universities and programs. Crowder College offers AS degrees in Nursing and Pre-Engineering.

Associate of Applied Science Degrees (AAS)

The degree given to students who have completed the requirements listed in the catalog. AAS graduates are prepared for the world of work upon completion of their selected program. While not designed for transfer, selected AAS programs may be transferred to four-year colleges through special articulation agreements.

Certificates of Study

Certificates of Study are given to students who have completed the requirements listed in the catalog. Certificates of Study are designed to prepare students for entry level positions in a variety of fields. The number of units of credit varies with the certificate program selected.

COURSE CLASSIFICATIONS

Auditing a Course

Students may AUDIT a class for personal development. No credit or grade is received for the classes, but fees are the same as for credit enrollment. Audits must be declared by the second week of class. Audits are not counted in calculating financial aid.

Community Education Classes

These classes are offered on a not-for-credit basis and have varying durations and fees. Classes are offered each semester and feature a variety of disciplines, skills, and activities. Interested individuals should contact the Community Education office at (417) 455-5632. No financial aid is available for these classes.

Experiential Credit

Opportunity for credit may be possible through on-the-job experiences, trade or technical skills, etc. Students interested in applying for such credit should do the following:

1. Contact the appropriate Division Chair or Program Director to arrange an appointment.
2. Submit a letter of application that includes documentation of the experience to be evaluated.
3. Attach an Alternative Learning form to be signed by appropriate individuals if credit is to be granted. Alternative Learning forms are available in the Academic Affairs Office.

Experiential credit will be evaluated by a team of professionals based upon the information presented by the student. There is a charge of \$50 per course for the evaluation. No financial aid is available for this credit.

Flex Classes

Classes that employ a combination of in-class attendance and on-line course work. Students must meet online course requirements to enroll in flex classes.

Non-traditional Credit

Requests for college credit acquired through means other than classroom or laboratory experience should be initiated in the Academic Affairs Office. The student should arrange for an appointment with the appropriate Division Chair or Program Director and

have appropriate certificates, test scores or other documentation of successful completion of the work for which s/he is requesting credit.

Non-traditional credit will not be transcribed if the student is not enrolled. No financial aid is available for this credit.

Online Course

A course conducted entirely over the internet through the institutional learning management system, Canvas. Students are responsible for maintaining access to a properly equipped computer with reliable access to the internet to complete online coursework. Additional technological requirements may be required based on a program or course-level basis. Online courses do not include scheduled face-to-face meetings, but there may be specific times that require video conferencing or other planned interactions. Students must meet college-level English and Reading requirements (see Assessment and Placement) to enroll in online classes.

Programs of Study

Students consecutively enrolled must adhere to program requirements listed during the first semester enrolled but may elect to use the current catalog program requirements, but not more than one catalog shall be applied to meet graduation requirements. Students requesting to change to new program requirements under the current catalog should contact their advisor or the Records Office, prior to submitting a Graduation Check form, to receive advisement on graduation requirements. Students not consecutively enrolled must adhere to any new program requirements and policies as listed in the current catalog.

Repeat Course

A course already taken by a student in which credit has been earned may be repeated. When a course is repeated, regardless of the initial grade, the most recent grade earned will be calculated in the GPA. The original course that is repeated cannot be used to fulfill graduation requirements. Only the final attempt of a course may be used to fulfill graduation requirements. A course may be repeated after graduation; however, the student will not be eligible for honors and recognitions after graduation unless the student is seeking another certificate or degree.

All grades including the original course and repeated course will appear on the transcript. A course may be

repeated more than once; however, the most recent grade is always used in GPA calculations. The transcript will note the cumulative GPA which includes all attempted hours for graded course work. Repeated classes may not be funded by Veterans Benefits, Federal Financial Aid awards, or A+.

Self-Directed Learning

On a very limited basis, students may enroll in coursework as self-directed learners. The Instructor, the Division Chair and the Vice President of Academic Affairs must grant approval. Forms are available in the Office of Academic Affairs.

Traditional Course

Traditional courses meet with the instructor in a classroom. Time spent in class weekly corresponds to the number of credit hours earned. Additional time may be necessary for lab work.

PAYMENTS

Students are responsible for the timely payment of tuition, fees, and other applicable charges. Students will not be considered officially enrolled until all financial obligations have been met.

Acceptable Payment Arrangements

1. Payment of account in full
2. Proof of adequate Federal financial aid (Pell, etc.) or third party payment (VA, TRA, A+, etc.)
3. Participation in the college sponsored payment plan (contact the Cashier's Office for more information)

Course Fees & Tuition

Tuition is established by the Crowder College Board of Trustees and is subject to change without notice. For a small number of programs, a flat tuition rate is charged for enrollment in the program. A few specialized programs charge "differentiated tuition." Differentiated tuition is the amount the student would pay based on their residency plus a percentage to cover program or equipment expenses.

For a majority of the programs at Crowder College, tuition is charged based on the number of credit hours in which a student is enrolled. Tuition is affected by residency status associated with three categories. Those three tuition categories are "In-District," "Out-of

-District," and "International."

All fees are approved by the Crowder College Board of Trustees and are subject to change without notice. Tuition and facility use fees are charged to each student based on the number of credit hours or course in which a student is enrolled. These fees cover operational services at Crowder College. Additional fees may be charged based on the specific course in which a student is enrolled. These fees cover specific supplies or administrative costs needed for specific courses.

For a complete listing of Crowder College tuition and fees, please see: <http://www.crowder.edu/financial-aid/tuition-residency/>

Payment Arrangements

Students may enroll in classes during designated enrollment periods. Payment arrangements must be made at time of enrollment. Acceptable payment arrangements include:

1. Payment in full
2. Current FAFSA completed and all requested documents on file
3. Participation in the college sponsored payment plan

If arrangements have not been made by the end of the month the semester starts, the student's enrollment may be cancelled.

COURSE CHANGES AND ATTENDANCE

Students are responsible for their class enrollment status and may add classes through the registration deadline.

Students are also responsible to officially withdraw, in writing, from their class(es). Discontinuing attendance does not constitute a withdrawal.

Students who are reported as having never attended class(es) by the first four (4) weeks of the semester will constitute an administrative withdrawal and the student will not be guaranteed re-entry to the dropped courses. Students eligible for financial aid are not eligible to receive disbursements for never attended courses.

Withdrawal forms are available at each Crowder College location and may be completed and submitted

to the appropriate personnel, or a written notification that clearly indicates the class(es) to be dropped may be mailed directly to: Crowder College, Admissions Office, 601 Laclede, Neosho, MO 64850.

A student may withdraw from a traditional semester (16 week) course without grade penalty during the first twelve weeks of a traditional semester, the first three weeks of a 4 week semester, or the first six weeks of an 8 week semester. Students wishing to withdraw from any other course must do so prior to mid-term of that course. It is very important that students refer to the Tuition Refund Policy to understand what amount of tuition, if any, will be refunded based upon their withdrawal date. Failure to withdraw from a course will result in a grade of an "F" for the course(s) and the student will be financially responsible for the tuition and fees.

Classification of Residency

In-District: Students whose permanent home is within the main Crowder College district (Neosho, Diamond, Seneca, East Newton and McDonald County school districts). Students (spouses, parents or guardians) owning property in the district are considered in-district residents. Full-time active duty military personnel stationed on a Missouri military base, their spouses and dependents are considered residents of the district. The residency status of recently discharged veterans will be based on legal residency at the time of induction into military service or on residency established during service.

Out of District: Students whose permanent home is located outside of the college district's boundaries.

International: Students whose citizenship is to a foreign country at the time of registration. Students are not eligible to change their residency status while they remain citizens of a foreign country.

Course Cancellations

There are times when classes may be cancelled due to low enrollment. Fees paid for such classes will be refunded.

Hardship Withdrawals

Students experiencing extenuating medical, financial, or family hardships which prevent course completion may submit a request for Hardship Withdrawal to the Vice President of Student Affairs. The student may be required to document unusual circumstances which justify request for a hardship withdrawal. The granting of a hardship withdrawal will also depend upon

whether the student is passing the course as of the effective date of the hardship request. A hardship withdrawal does not clear financial aid responsibilities. Refer to the Student Handbook for restrictions.

Residency Status Policy

For tuition purposes, residency status is determined at the time of application for admission to Crowder College based upon the student's legal permanent address or the domicile where they plan to return or reside. The residence of a minor student under the age of 21 will be the residence parents/legal guardian (s) unless the student has established court declared emancipation.

Tuition and Fees Refunds

Students are eligible for refunds only if s/he has followed official withdrawal procedures in the Records Office. Failure to attend classes does not constitute a withdrawal. If the student has paid college costs and officially withdraws, tuition will be refunded according to the refund policy after all charges have been applied to the account. If college costs have been partially or fully paid by financial aid (scholarships, grants, or loan) the refund may be returned to that financial aid source first. Any remainder will be returned to the student.

Please refer to the published refund schedule.

CHANGE OF RESIDENCY

The burden of proof of establishing permanent residency rests on the student. A request for a change in status must be submitted in writing to the Admissions Office with appropriate evidence or documentation of a permanent residency change. All requests must be received by the Admissions Office no later than the second week of the petitioning semester. Otherwise, residency status does not change during the semester. Change of residency status will only affect future terms and is not retroactive for previous semesters. In accordance with the Due Process policy, students may appeal decisions by submitting a grievance to the Vice President of Student Affairs.

Evidence of Domicile

1. Proof of residence for 12 prior consecutive months within the district or state through lease agreement or deed.

2. Marriage Certificate and proof that new spouse owns property within the district or state.
3. Documentation reflecting in district or state residency and presence within the district or state of Missouri for the purpose of retirement, full time employment due to company relocation or transfer, or professional practice or business ownership.
4. Military discharge or active duty documents (DD214).
5. Proof of employment within the state.
6. Paid personal or property tax receipts within the college district (In-District).

FINANCIAL AID

Federal Direct Loan Program

Eligibility: Students must be enrolled at least half time (6 hours).

Amount: There is an annual base award amount for dependent students of \$3,500 for freshmen students and \$4,500 for sophomore students. Independent students may borrow additional unsubsidized funds up to a maximum of \$6,000 annually and dependent students may borrow additional unsubsidized funds up to a maximum of \$2,000 annually. Students may not be eligible for the maximum amounts due to their cost of attendance and other funding. The college encourages students to borrow no more than s/he reasonably needs. Part of the advantage of a low-cost institution such as Crowder College is that a student may further his or her education without incurring large amounts of debt.

Apply to: Applications are available on the Crowder College website.

Important: Students whose complete and accurate aid applications are submitted by the fall semester priority date (July 1), or the spring semester priority date (November 1), may reasonably expect Pell Grant/Student Loan payments around the sixth week of the affected semester.

Students completing the aid application process after July, but before the start of the semester may reasonably expect payment by midterm. Students completing the aid application process after mid-October may reasonably expect payment within four

weeks after submissions are complete.

More detailed information about the application process for each type of aid and the financial aid policies and procedures at Crowder College can be found in the Financial Aid Handbook available on the college website www.crowder.edu.

Notice to Students/Parents: Any student applying for financial aid (or the parent of a student) who purposely submits misrepresented information and/or altered documentation for the purpose of increasing his/her student aid eligibility or fraudulently obtaining federal funds will have the suspicions and evidence reported to the Office of the Inspector General, Washington, D.C. or to local law enforcement officials. Students will be liable and will be billed by the Crowder College Business Office for any aid funds which are received resulting from any type of overpayment which is caused by incomplete or inaccurate information submitted to the Financial Aid Office on all aid applications.

Federal Supplemental Educational Opportunity Grants (FSEOG)

Eligibility: FSEOG funds are awarded to the earliest eligible applicants with the greatest need. The student will indirectly be applying for these funds as part of the Pell Grant process and will be notified of any award by Crowder College.

Amount: Awards are generally made from \$200 - \$400 per year depending on the residency status of the eligible student.

Federal Work-Study Program

Eligibility: Students with demonstrated financial need may be eligible for work-study hours. The number of hours a student may work per week is determined by the expected family contribution which comes directly from the Student Aid Report, the "cost of education" as figured by the school, and all other sources of aid.

Amount: Work study jobs pay at least the Federal Minimum Wage. The yearly amount a student may earn is based upon his/her calculated need. The Financial Aid Office will determine the amount of a possible work-study award for each student applying for aid at Crowder College.

Apply to: Interested students must first complete the Free Application for Federal Student Aid.

Jobs: For available on-campus work-study positions, please see the Career and Transfer Services Center at

the main Neosho campus.

Honors Program

Students demonstrating high academic standards are invited to become members of the Crowder College Honors Program. The program has been designed to provide an arena for active participation in exploring a variety of in-depth subjects, assessing one's own strengths and weaknesses, and using critical thinking as a tool for problem solving. The program reinforces the validity of the scholarly approach and prepares participants for greater intellectual challenges. The Honors Program also fosters one-on-one instruction and mentor-based relationships. Honors students receive tuition and book scholarships each semester and the Honors designation is transcribed at the time of graduation. Requirements for participation in the program have been established for high school graduates as well as transfer and non-traditional students. Those interested in the Honors Program should contact the college's Honors Program Coordinator. (417) 455-5570.

Pell Grants

Eligibility: Be a U.S. citizen or eligible non-citizen, have a high school diploma, high school equivalency, home-school certificate.

Amount: Awards vary based upon the need of individual students as determined by the U.S. Department of Education needs analysis formula in combination with the cost of the program involved. Pell Grant award amounts are determined yearly by the U.S. Department of Education. Areas of family information that determine eligibility are: Family size, number in college, income and assets.

Apply To: Interested students must file an application for Federal Student Aid, available online at www.fafsa.gov.

Scholarships

Crowder College offers a variety of college sponsored scholarships. College sponsored scholarship recipients must have acceptance forms signed and on file in the Financial Aid Office by July 1. Some scholarships may require applications, auditions, etc. Students may only receive up to four semesters of college-sponsored scholarships.

A complete list of Crowder College scholarships and the application guidelines are in the Scholarship Handbook which is available on the Crowder College website and in the Financial Aid Office, first floor,

Farber Building.

Veteran's Services

The Financial Aid Office acts as the Certifying Official for veterans enrolled at Crowder College. Information about academic assistance and counseling is available to anyone entitled to educational benefits from Veterans Administration (VA). Information about VA benefits may be obtained from the Financial Aid Office, (417) 455-5434.

The following individuals shall be charged the in-state rate, or otherwise considered a resident, for tuition purposes:

- A Veteran using educational assistance under either chapter 30 (Montgomery G.I. Bill – Active Duty Program) or chapter 33 (Post-9/11 G.I. Bill), of title 38, United States Code, who lives in the State of Missouri while attending a school located in the State of Missouri (regardless of his/her formal State of residence) and enrolls after a period of active duty service of 90 days or more.
- Anyone using transferred Post-9/11 GI Bill benefits (38 U.S.C. § 3319) who lives in the State of Missouri while attending a school located in the State of Missouri (regardless of his/her formal State of residence) and enrolls in the school within three years of the transferor's discharge or release from a period of active duty service of 90 days or more.
- A spouse or child using benefits under the Marine Gunnery Sergeant John David Fry Scholarship (38 U.S.C. § 3311(b)(9)) who lives in the State of Missouri while attending a school located in the State of Missouri (regardless of his/her formal State of residence) and enrolls after the Service member's death in the line of duty following a period of active duty service of 90 days or more.
- Anyone described above while he or she remains continuously enrolled (other than during regularly scheduled breaks between courses, semesters, or terms) at the same school. The person so described must have enrolled after the period following discharge or death described above and must be using educational benefits under chapter 30, chapter 31, or chapter 33, of title 38, United States Code.
- A Veteran using educational assistance under either chapter 31 or chapter 33 will not be penalized with late fees, the denial of access to classes, libraries or other institutional facilities, or

the requirement to borrow additional funds to cover financial obligations to the institution due to the delayed disbursement of a payment by the U.S. Department of Veterans Affairs. The restriction on penalties would not apply in cases where the student owes additional payment to the school beyond the amount of the tuition and fee payment from VA to the school.

STUDENT PROGRESS AND POLICIES

Satisfactory Academic Progress for Financial Aid

The U.S. Department of Education requires institutions of higher education to define, establish, and enforce minimum standards of satisfactory progress for students receiving financial assistance. These standards must include qualitative and quantitative measures for evaluating the progress of financial aid recipients towards their educational goals. An assessment of these efforts will be performed after each semester. State, non-federal, and institutional programs have differing standards of satisfactory academic progress.

Federal financial aid regulations provide for assistance up to 150 percent of the length of the academic program. Students receiving financial aid must:

- successfully complete (with a grade of D or better) two-thirds (67%) of their total credit hours attempted, and
- must maintain a 2.0 cumulative grade point average (GPA).

If a student does not meet these requirements, the student will be placed on Financial Aid Warning for one semester. At the end of the Financial Aid Warning semester, the student must meet the cumulative GPA and credit hour completion requirements in order to avoid being placed on Financial Aid Suspension.

Students placed on Financial Aid Suspension due to extenuating circumstances may appeal in writing to the Crowder College Financial Aid Office.

Academic Forgiveness

Extenuating circumstances may justify a student being able to recover from an academic deficiency in ways which do not penalize his/her academic standing. The student's academic transcript; however, will be a full

and accurate record of the student's academic career. For students receiving academic forgiveness, the transcript will record the graduation GPA excluding courses for which academic forgiveness has been granted.

Academic forgiveness may be granted for all Crowder College courses taken during one (1) semester and one (1) time during a student's academic career and must be requested prior to graduation.

- For students not continuously enrolled, academic forgiveness will be granted following a one (1) year absence or the most recent twelve (12) credit hours have been completed while achieving a minimum 2.0 semester GPA.
- For students continuously enrolled, academic forgiveness will be granted if the most recent twelve (12) credit hours have been completed while achieving a minimum 2.0 semester GPA.

Academic forgiveness cannot be used to forgive ineligibility for financial aid, athletics, or other department scholarships which may result from academic deficiencies. Academic forgiveness will only apply to the academic records.

Please refer to the Academic Forgiveness form located in the Records Office for restrictions.

Academic Warning

First time college students who earn a GPA below 2.0 will be placed on academic warning.

Continuing students with a semester GPA below 2.0 and a cumulative GPA higher than 2.0 will be placed on Academic Warning.

While College Connections (LOC 103) is not required for students on Academic Warning, an advisor may recommend enrollment in the course with permission of the Division Chair of Learning Opportunities.

Academic Probation

Continuing students on Academic Warning who earn a semester GPA below 2.0 will be placed on Academic Probation, regardless of the cumulative GPA. This also applies to students transferring in with a GPA below 2.0. After being placed on Academic Probation, the student must maintain a 2.0 GPA each semester until their cumulative GPA is above a 2.0 and the student will be in Academic Good Standing.

Students who are on Academic Probation who

maintain a semester GPA of 2.0, but a cumulative GPA less than 2.0 will be placed on Academic Probation-Continued.

If the student with an Academic Probation-Continued status earns an additional semester GPA below 2.0, but maintains a cumulative GPA above 2.0, the student will remain on Academic Probation-Continued unless the cumulative GPA falls below 2.0, at which the student will go on Academic Suspension. Continuing students on Academic Warning who earn a semester GPA below 2.0 will be placed on Academic Probation, regardless of the cumulative GPA. This also applies to students transferring in with a GPA below 2.0. After being placed on Academic Probation, the student must maintain a 2.0 GPA each semester until their cumulative GPA is above a 2.0 and the student will be in Academic Good Standing.

Students who are on Academic Probation who maintain a semester GPA of 2.0, but a cumulative GPA less than 2.0 will be placed on Academic Probation-Continued.

If the student with an Academic Probation-Continued status earns an additional semester GPA below 2.0, but maintains a cumulative GPA above 2.0, the student will remain on Academic Probation-Continued unless the cumulative GPA falls below 2.0, at which the student will go on Academic Suspension.

All students who are placed on Academic Probation will be required to enroll in College Connections (LOC 103), unless they have previously taken the course while on Warning. A Student Success Hold will be placed on the student's account to signify this requirement.

A student who is on Academic Probation and earns a semester GPA above a 2.0, but still has a cumulative GPA below 2.0 will be placed on Academic Probation-Continued. The student will not be in Academic Good Standing until their cumulative GPA is also above 2.0.

A student who is on Academic Probation and earns a semester GPA below 2.0, but still has a cumulative GPA above 2.0 will be placed on Academic Probation-Continued.

A student who is on Academic Probation or Academic Probation-Continued who earns a semester GPA and cumulative GPA less than 2.0 will be placed on Academic Suspension.

The student will not be in Academic Good Standing until they achieve a semester and a cumulative GPA above 2.0.

Academic Suspension

A student with a previous academic standing of Academic Probation or Academic Probation-Continued earning a semester GPA and cumulative GPA below 2.0 will be placed on Academic Suspension. Students may appeal the first Academic Suspension according to the procedures in the Student Handbook. Students who are on Academic Suspension will be required to complete College Connections (LOC 103), unless previously passed with a C or better while on Academic Warning or Academic Probation.

A student currently on Academic Suspension who earns a semester and cumulative GPA below 2.0 will be placed on a second Academic Suspension and will not be allowed to enroll or appeal the Academic Suspension for one year. The student must petition for admission and submit an Academic Suspension appeal in accordance with the policies in the Student Handbook.

A student currently on Academic Suspension who earns a semester GPA above 2.0, but cumulative GPA below 2.0 will be placed on Academic Probation-Continued until they are in Academic Good Standing. If the student has been placed on Academic Suspension two times and is placed on Academic Suspension a third time, the student is not eligible for admission to Crowder College. A student suspended three times may appeal to the Vice President of Student Affairs.

Attendance

Students are expected to attend all class sessions and report to each session on time. If an absence occurs, students are responsible for all work missed. Excessive absences may result in a lowered or failing grade in the class.

Administrative Withdrawal

In order to meet federal financial aid and Department of Education guidelines, Crowder College requires faculty to take attendance. To comply, a student does not attend a seated course or fails to participate in an online course for 14 consecutive calendar days will be administratively withdrawn from the course. Attendance at Crowder requires a student to be "academically engaged" in the course. Academic engagement

includes:

- physically attending a class where there is an opportunity for direct interaction between the instructor and students;
- submitting an academic assignment;
- attending a student group that is assigned by the institution;
- participating in an online discussion about academic matters; and
- initiating contact with a faculty member to ask a question about the academic subject studied in the course.

If a student is administratively withdrawn from the course, the student will receive a letter and an email making them aware of the withdrawal. Within seven (7) calendar days after the withdrawal occurred, a student can request reinstatement by contacting the Academic Affairs Office. The Academic Affairs Office will work with the faculty member to determine if the request for re-instatement should be granted. If reinstated, Academic Affairs will notify the student and the Records Manager, both via email, and the student will be then be reinstated in the course. This request is the one as appeal level and the decision at this level is final.

Credit Hour Policy

Expectation for students: Crowder College's assignment of credit hours shall conform to commonly accepted practices in higher education and the federal definition of a credit hour. For each credit hour, students should anticipate spending a minimum of 150 minutes per week based on a 16-week semester. The distribution of this time will vary based on the course and delivery method, but could include direct faculty instruction, classroom activities, web-based activities, laboratory work, research, writing papers and reports, reading text and articles, internship hours, clinical hours, studio work, or class and assessment preparation.

Dean's List/Honors

Full-time students with a 3.50 or higher semester grade point average are placed on the Dean's List. (A full-time student is defined as a student taking twelve [12] credit hours or more. The twelve credit hours must consist of credit earning hours of courses numbered 100 or higher.) Students with high academic records are eligible for membership in the Crowder Chapter of Phi Theta Kappa, national scholastic honor society. Associate degrees and certificates are awarded "With Honors" to students earning the

following cumulative GPAs the semester before graduation:

- 4.0 – Summa Cum Laude
- 3.85-3.99 – Magna Cum Laude
- 3.5-3.84 – Cum Laude

For a May graduate, the cumulative GPA from the fall semester will be used to determine honors. For a December graduate, the cumulative GPA from the spring or summer semester, whichever is most recent, will be used to determine honors.

Grades

Grades are awarded on the following point system:

<u>Work Quality</u>	<u>Grade</u>	<u>Grade Points</u>
Excellent	A	4
Above Average	B	3
Average	C	2
Passing	D	1
Failure	F	0
Withdrawal	W	0
Repeat	R	0
Audit	Au	0
Credit	Cr	0
No Credit	NC	0
Pass	P	0
Incomplete	I	0

Grade Point Average (GPA)

A student's grade point average is computed at the end of each semester. The average is used in determining class rank, graduation, honors, academic alert, warning, probation and suspension. Repeated courses cancel the former grade and the most recent grade is used to compute the GPA. The original course that is repeated cannot be used to fulfill graduation requirements. Only the final attempt of a course may be used to fulfill graduation requirements. All grades including the original course and repeated course will appear on the transcript. A course may be repeated more than once; however, the most recent grade is always used in GPA calculations.

The semester grade point average is calculated by:

1. Multiplying the credit hours of a course by the points earned for the course grade.
2. Adding the points earned for each course.
3. Dividing the total points by the number of credit hours attempted.

Example:

$$\text{ENGL 101 (B):} \quad 3 \text{ hrs} \times 3 \text{ grade points} = 9$$

MATH 101 (A): 3 hrs x 4 grade points = 12
 PSYC 101 (C): 3 hrs x 2 grade points = 6
 HIST 106 (F): 3 hrs x 0 grade points = 0
 BIOL 101 (D): 5 hrs x 1 grade point = 5
 Total = 32 grade points (GP)
 32 /17hrs = 1.882 (GPA)

Cumulative grade point average is the total points earned in your college career divided by the total number of credit hours. Classes with course numbers below the 100 level are not figured in the semester and cumulative GPA and are not counted toward graduation. Records of student progress are kept on file in the Records Office.

Grade Reports

Final grade reports are issued at the end of each semester upon request. No final grade report will be issued, or credit granted, if the student has a financial obligation to the college or if the student file is incomplete.

Incomplete Grades

A grade of Incomplete may be assigned and submitted by the instructor when a student has completed and passed eighty-five percent (85%) of the work required for a course but, for reasons beyond the student's control, cannot complete the entire course during the official scheduled dates of the class. Incomplete grades are contingent upon instructor approval, and instructors are under no obligation to grant them. In cases where an instructor agrees to assign an "I" grade, it is important to arrive at an agreement about exactly what is required in order to finish the course and what percentage of the grade will be based on the remaining work. The deadline for final submission of all material to remove the Incomplete will be determined by the instructor, but no longer than one semester. Failure to complete the assigned work within one semester will result in an "I" being converted to an "F."

Procedures for Implementing Finals due to School Cancellation

If Crowder College is closed during finals week due to inclement weather, the following procedures will be implemented regarding finals.

1. Due to state and national accreditation standards, students in the Crowder Nursing program and the Crowder Veterinary Technology program must participate in Final exams. Students in these programs do not have the option to take the grade

they have earned going into the final exam. Students in these two programs should reference his or her program handbook for specific information regarding the procedures for implementing finals due to school cancellation in the Crowder Nursing Program and the Crowder Veterinary Technology.

2. Distance learning or online finals are held as planned. No adjustments in the plans, schedule, or process for online classes. If the online final is a proctored on-ground final, the rules in #3, #4, and #5 apply.
3. Students who miss an on-ground final exam due to school being cancelled on the day of the final at their attendance location may take the grade they have earned going into the final exam.
4. Students who miss an on-ground final as defined in #3 may ask the instructor to take the missed final exam. The student must contact his or her instructor via e-mail DURING FINALS WEEK ONLY (Monday thru Thursday). The instructor will set the time and date to take the exam, which needs to occur prior to the end of business day on Friday of finals week. If a student does not make arrangements during finals week, he or she will be given the grade he or she had going into the final exam. A student may not ask after finals week for a date to take a missed final. If a student makes arrangements to take the missed final exam, the grade earned including the final exam is the final grade for the class. The student may not return to the grade going into the final exam.
5. If the Crowder College Campus location where the class meets is closed all week, then the current grade will count as the final grade.

Readmission, Suspension and Appeal Process – Refer to Student Handbook.

GRADUATION

Degree/Program Requirements

Candidates for Associate in Arts, Associate in Science and Associate in Applied Science degrees must earn a minimum of sixty (60) hours with at least a 2.00 cumulative GPA on all coursework. Certificate graduates must also earn a cumulative GPA of 2.0 on all coursework. Crowder College must provide a minimum of fifteen hours of the final thirty (30) hours. Students in A.A.S. programs must complete at

least 12 credit hours from the program's core technical classes through Crowder College. For multiple degrees or majors see the Glossary of College Terms.

Graduation Application

Graduation Applications must be initiated by the student and are processed in the Records Office prior to the semester of intended graduation. Students completing their course work in August or December will be invited to participate in the Spring graduation ceremony.

1. Complete a Graduation Application in the Records Office or online via My Crowder per the following dates:
 - DEC graduates - MAR 1
 - MAY graduates - OCT 1
 - JUL graduates - MAR 1
2. Sign up for and take the exit exam. Dates for exit exams will be posted in the SSC and on the Crowder College web site.
3. Have all outstanding accounts cleared in the Cashier's Office, Library, and Bookstore.
4. Students who received Stafford Loan proceeds must complete an exit interview with the Financial Aid Office.

It is ultimately the responsibility of the student to monitor graduation requirements and see that these requirements are met.

Transcripts

The Records Office will send official transcripts to other schools or employers with written permission of the student. In compliance with Public Law 93-380, the Family Educational Rights and Privacy Act of 1974, Crowder College affords all students the right to inspect official records directly relating to them and the right to challenge any statement considered to be inaccurate, misleading or inappropriate. The college requires written student consent before releasing college records. Complete information regarding student records is available by contacting the Records Office. See Student Handbook "Rights to Privacy and Educational Records".

CAMPUS SERVICES AND RESOURCES

College Assistance Migrant Grant Program (CAMP)

CAMP is a federally funded program designed to provide an opportunity for students of migrant families to attend college. Crowder College's program recruits students from Missouri, Oklahoma and Arkansas. CAMP assists students in successfully completing their first year of college. CAMP is located on the 2nd floor of Newton Hall.

Faculty/Academic Advisors

Each student is assigned an academic/faculty advisor who is knowledgeable in his/her field of interest. These advisors assist in developing realistic educational and career goals and selecting coursework that best fits student abilities and needs. Students without clear career goals will receive enrollment forms from assigned general education advisors. The student is expected to contact his/her advisor prior to each registration period for assistance in planning appropriate course work. The advisor's approval may be required for students to register.

Student Success Center (SSC)

The SSC offers a wide range of assistance and resources to all Crowder students. The SSC offers advising, enrollment, tutoring services, make up testing, special accommodations testing, a computer lab, and retention and student success services. It also serves as a valuable resource to faculty and staff at all Crowder campuses. Assistance with the admission process is the initial service offered through academic assessment and placement in the SSC Testing Center. The SSC and Testing Center staff are eager to assist students who desire to arrange tutoring, testing, or need assistance with enrollment, academic planning or transfer services.. The PLATO Learning Systems and HAWKES math software is available in the computer lab for all students. The SSC can be reached at (417) 455-5602. The Testing Center can be reached at 417-455-5433.

Career Services

Career assessment evaluation is offered for students who are unsure what major they wish to pursue. To help students prepare for their job search, the Center also offers resume and cover letter writing assistance, mock interviewing, salary negotiation practices, job listings, and over 500 career related resource materials. The Career Services Center can be contacted at (417) 455-5618.

Student Accessibility Office

The Student Accessibility Office is committed to ensuring that students with disabilities have equal access and reasonable accommodations to goods, services, and facilities. In addition, the Student Accessibility Office will ensure that students with disabilities are not excluded, denied services, segregated or otherwise treated differently than other people. The Student Accessibility Office also makes information accessible to and useable by people with communication disabilities.

The Student Accessibility office is located in the Student Success Center in McDonald Hall, and can be contacted at (417) 455-5733. For more information, please review the Student Handbook on Policies and Procedures: Accommodations, Accessibility, and Testing online at www.crowder.edu.

(See Student Handbook)

Learning Resources Center (LRC)

Found in the Bill and Margot Lee Library the LRC serves students, faculty, and staff at all campuses by providing access to information resources, instruction, technology, and services that support teaching and learning in the mission of the college. Library instruction is provided to classes, small groups and individuals.

The library collections include approximately 38,000 books, 20,354 e-books, 155 current periodical subscriptions, 2500 art prints, over 170,000 units of microforms, approximately 3700 audiovisual programs including recorded books, VHS and DVDs, and online research databases. Library electronic resources expand the periodicals collections to include many online full-text articles in magazines, journals, and newspapers, as well as online encyclopedias, dictionaries and atlases. For students and staff, remote access allows the internet-based full-text databases to be searchable from any campus computer or from home.

Traditional interlibrary loan services are available for resources not found in the LRC. The LRC is affiliated with MOBIUS, a statewide consortium of academic libraries. MOBIUS libraries share a common library platform that allows students and staff to borrow library materials from among the 60 member libraries with access to the books within three days. The SWAN online library catalog is the gateway to sharing resources among the nine libraries in the cluster that includes the Crowder College library.

There are 28 computer workstations available for student research. Many of the stations have application software to support classes. The library is typically open 66 hours per week for research, individual and small group study, leisure reading, viewing audiovisual programs, and computer usage.

The LRC receives support from the Foundation through private gifts and donations and from the Friends of the Library.

Student Support Services (Project Now)

The SSS program is designed to improve retention, graduation, and successful transfer of participants. SSS provides a supportive environment where participants can have their academic, career and personal needs met. SSS offers a wide variety of services including: academic support, study groups and individualized tutoring, personal advisement, cultural opportunities, computer lab, college transfer assistance, community service opportunities, scholarship information, technology check out, and weekly workshops on a wide variety of topics, all at no cost to the participant.

Eligibility requirements apply. Enrollment is limited. SSS is located at the Cassville Center, Nevada Center, Neosho main campus, and Webb City Center. Call (417) 451-3223 for contact information. (A federally funded Student Support Services TRIO program)

Student Housing

Information and housing applications for the Brown Residence Complex or Roughrider Village Apartments are available in the Campus Life Office, (417) 455-5644 or by email at CampusLife@crowder.edu.

Student Clubs and Organizations

There are many opportunities for students to become involved in extra-curricular activities and organizations on campus. It is important to find a good balance between academic and non-academic activities, but both are important to maximizing the college experience. Information regarding clubs and organizations can be obtained from the Campus Life Office, (417) 455-5644, or from the Student Services Office at the off-campus sites. Upcoming events will be posted to the campus events calendar at www.crowder.edu.

Career and Salary Information

Pursuant to Missouri HB 1606 (2018), information regarding the number of credit hours, program length, employment rate, wage data, and graduates employed in careers related to their program of study at Crowder College can be found at the following URL: <https://scorecard.mo.gov/scorecard/>. Search using School / Program "Crowder College" and choose the degree or credential type of interest. The following limitations to the data apply: Information provided is based on the most recent cohorts available. Typically, most recent cohorts for wage and completion data are six years prior to the current academic year. Time to complete a program of study varies depending on the number of credit hours students earn per semester.

Catalog, Program, Course, and Policy Changes

The information in the catalog was accurate at the time of publication. The College reserves the right to make changes affecting policies, fees, curricula or any other matters cited in the catalog. The College will give reasonable and adequate notice to students to allow time to adhere to any changes in the catalog. Fees, deadlines, academic requirements, courses, degree programs, and other matters described in the catalog may change with reasonable notice. Not all courses are offered each academic year and faculty assignments may change without notice.

For the most current version, please consult the online catalog at www.crowder.edu.

GLOSSARY OF COLLEGE TERMS

Academic Forgiveness – A procedure which permits students with a low semester GPA to request that all grades for all classes for only one semester be excluded from his/her academic record. Credit hours are still used to determine eligibility for financial aid, athletics, and departmental scholarships. The student's academic transcript; however, will be a full and accurate record of the student's academic career. For students receiving academic forgiveness, the transcript will record the graduation GPA excluding courses for which academic forgiveness has been granted.

Academic Probation – A student on Academic Warning who has a semester GPA less than 2.0 will be placed on Academic Probation. Once on Academic Probation, the student must maintain a 2.0 GPA each semester to avoid being placed on Academic Suspension. Must enroll in and pass LOC 103 with a C or better.

Academic Suspension – Students with a semester and cumulative GPA below 2.0 after a semester of Academic Probation will be placed on Academic Suspension. The student will not be able to enroll for one semester. Students are

eligible to appeal the Academic Suspension and will be assigned a Suspension Advisor to determine eligibility for enrollment. Must enroll in and pass LOC 103 with a C or better, if not previously passed while on Academic Probation.

Academic Warning – First semester students with a cumulative GPA below a 2.0; or continuing students with a semester GPA below 2.0 and a cumulative GPA above 2.0.

Associate in Arts Degree (AA) – The degree given to students who have completed requirements as listed in the catalog. Usually given to those who concentrate in liberal arts or business courses on the college transfer level. The degree requires at least 60 units of credit (credit hours).

Associate in Applied Science Degree (AAS) – The degree given to students who have completed the requirements as listed in the catalog. Requires at least 60 units of credit (credit hours).

Associate of Science Degree (AS) – This degree has been developed for transfer to specific universities and programs. Consult with an advisor about pursuing this degree.

Auditing a Class – Attending a course without expectation of credit. People who audit are not required to do the outside assignments or take the examinations. Standard in-district/

out-of-district fees apply. Audits must be declared by the end of the second week of the semester.

Co-requisite – An academic course strongly recommended or in some cases required to be taken in conjunction with the listed course. Student should check with an Academic Advisor as to whether the co-requisite is recommended or required for the student's degree.

Credit – A way of counting how much each course is worth toward graduation. Usually, credit hours are assigned to courses according to how many hours a week the course meets; however, in some fields you are required to attend class for more hours than announced credit. In art, for instance, you may spend four hours a week in class for two hours of credit. Your tuition is based on the number of credit hours for which you register.

Dean's List – A list of the full-time students with a 3.5 or higher semester grade point average for the semester. (A full-time student is defined as a student taking twelve [12] credit hours or more. The twelve credit hours must consist of credit earning hours of courses numbered 100 or higher.)

Double (or Multiple) Degrees – In order to gain multiple degrees at Crowder College a student will need to meet all the requirements of the new degree and have an additional 15 credit hours from the second degree Major Courses (Required Courses or Approved Electives) taken at Crowder College that were not counted toward another Crowder degree.

Dropping a Course – Official process for withdrawing from a course. In order to drop a course, students must fill out the appropriate forms in the Admissions Office, Student Affairs Office. Students who qualify may drop courses through My Crowder during allowed periods of time.

Elective – A course chosen to take but that is not a required part of the regular curriculum. Electives count toward the hours needed for graduation, but cannot replace the courses that are required in your program.

Extracurricular Activities – Opportunities the college offers as a part of its service to students. Usually free with a student ID card. Can include such things as movies, sports, clubs, student government, dances, parties, etc.

Finals – Examinations given at the end of a semester.

Financial Aid – Financial aid may include grants, loans, scholarships, or work study positions.

Freshman – Students who have completed less than 28 hours of credit.

Full-time Student – A student taking twelve (12) credit hours or more. The twelve credit hours must consist of credit earning

hours of courses numbered 100 or higher.

Grade Point Average (GPA) – The average of a student's grades calculated by assigning a value of 4 points for an A; 3 points for a B; 2 for C; 1 for D; and 0 for an F.

Graduate – A student who has finished the required program of study, completed the necessary hours and received a degree.

Grant – Money given to help students attend college. Usually grants do not have to be repaid.

Humanities – Courses dealing with such things as literature, music, art, foreign languages, philosophy, and language.

Intramural Activities – Usually games and sports limited to people attending Crowder College.

Life Sciences – Courses dealing with physical development and health, including biology, nursing, dental hygiene, etc.

Part-time Student – Any student taking less than 12 credit hours in a semester.

Pre-registration – Enrolling in courses before a semester starts. Payment will not be due for these courses until the beginning of the enrolled semester.

Prerequisite – A course that must be completed before taking a more advanced course in the same field. English Composition I is a prerequisite for English Composition II, for instance.

Program of Study – The academic courses required for a student to successfully complete a degree.

Registration – Completing the

forms and paying the fees necessary to enroll in a class.

Scholarship – A sum of money or other aid granted to a student because of merit, need, etc. to pursue his/her studies.

Self-Directed Learning (SDL) – In this format, the student works independently on mastering the competencies for the class. Division Chair approval is required and this format is only utilized in rare and unique situations.

Social Sciences – Courses dealing with how people live, including things such as sociology, economics, political science, history, psychology, etc.

Sophomore – A student who has completed 28 credit hours or more.

Suggested Plan of Study – The suggested sequence of courses, listed by semester, the students could follow to lead to completion of the degree.

Transcript – A permanent record of the courses attempted, the grades received, and the courses from which withdrawn.

Transfer Credit – Courses which four-year colleges will accept as meeting part of their requirements.

Twilight Classes – Any class with a meeting time that begins after 3:00 p.m., i.e., 3:15 or 3:30.

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ACCOUNTING

ACCT 160 **S** **Payroll Accounting (3-0)** **3 Credits**

This course introduces the subject of payroll by presenting the federal rules and regulations governing employment, compensation, and payroll taxes using a computerized practice set. It takes the student step-by-step through the entire payroll process—from timekeeping, computation of gross earnings, determining federal income tax and other payroll tax withholdings: to preparing and distributing the payroll: to the vital step of recording or accounting for wages, tax liabilities, and payments or deposits.

ACCT 165 **F** **QuickBooks (3-0)** **3 Credits**

This course includes computerized double-entry accounting systems and concepts for service and mercantile business enterprises using current accounting software. Journals, ledgers and basic financial statements are covered. (Prerequisite: ACCT 201)

ACCT 201 **F,S,U** **Principles of Accounting I (3-0)** **3 Credits**

This course includes double-entry accounting systems and concepts for business enterprises. Journals, ledgers and basic financial statements are covered.

ACCT 202 **F,S** **Principles of Accounting II (3-0)** **3 Credits**

This course is designed to provide an understanding of accounting information and its use for business decision making. The emphasis is on where accounting data is obtained, what kind of information is needed, and how it is used in the management process. (Prerequisites: ACCT 201) (2)

ACCT 245 **F** **Tax Accounting (3-0)** **3 Credits**

This course acquaints students with the economic and social policy implications of the tax systems by which governments raise revenues. In addition, it familiarizes students with federal income tax as it applies to the individual. Students will learn how to prepare individual federal income tax returns.

ACCT 250 **S** **Certified Bookkeeper Review (3-0)** **3 Credits**

This is a capstone course for the accounting program and will prepare students for the Certified Bookkeeper Exam and leads to a national certification in bookkeeping through the American Institute of Professional Bookkeepers (AIPB). This certification is a practical way to demonstrate a high level of skill and experience to advance an accounting career. If you choose to be a candidate for the Certified Bookkeeper designation, you must pass the exam which consists of two test sittings offered at a third-party testing center plus two workbook exams offered onsite. Taking the Certified Bookkeeper national exam is optional and is not a requirement to pass this course. (Prerequisites: ACCT 202 or permission of instructor)

ACCT 290 **Upon Request** **Accounting Clerk Internship (1-2)** **2 Credits**

Supervised work experience allows the student to apply skills and office procedures in an actual office situation. Students will be required to gain experience in the area in which they are seeking a degree. Students will meet once a week in class and will work 80 hours during the semester in supervised work experience. (Sophomore level)

ADVANCED MANUFACTURING TECHNOLOGY

AMT 102 **F,S** **Introduction to Industrial Electricity (2-2)** **3 Credits**

This course is designed to provide a broad range of basic information and hands-on practice to beginning students in industrial electricity. Topics covered at the introductory level will include basic electrical circuits, electrical measurements, electrical relay control logic, residential and industrial wiring. A course fee will apply. (Corequisite: AMT 111)

AMT 104 **F,S** **Electrical Motor Controls (2-2)** **3 Credits**

This course is designed to provide a broad understanding of electric motor control operations. The topics covered will include interpretation of schematics, diagnostic trouble shooting, electronic sensing devices, safety, three phase power, ladder logic and timer controls. A course fee will apply. (Prerequisites: AMT 102)

AMT 111 **F,S** **Introduction to Industrial Safety (1-0)** **1 Credit**

This course is designed to give the students the basic safety knowledge to obtain an "OSHA 10" card (OSHA = U.S. Occupational Safety and Health Administration). Students will access a selected on-line training site and complete the requirements to obtain OSHA 10 certification. A course fee will apply.

AMT 112 **F,S** **Occupational Safety (1-3.5)** **3 Credits**

This course provides information and training to address the hazards found in renewable energy, construction, and industrial jobs. The course is designed to give the students the basic safety knowledge to obtain an "OSHA 10" card (OSHA = U.S. Occupational Safety and Health Administration). Topics include: working at heights, assisted and self-rescue, working around heavy equipment, first aid/CPR, and basic firefighting. A course fee will apply.

AMT 122 **F,S** **Basic Machining (Manual) (2-2)** **3 Credits**

This course is designed to provide a working knowledge of basic machine tools and their safe operation. Topics covered will include: shop safety, basic mathematics, blueprint reading, precision measurement, metal sawing, drills and drilling, bench grinding, engine lathes, and milling machines. A course fee will apply.

AMT 123 **F,S** **Measurement and Print Reading (2-2)** **3 Credits**

This course is designed to provide a working knowledge of basic machine measurements and print reading. Topics covered will include: U.S. customary measurement, measurement conversion, print reading, drawings and dimensions, holes and fasteners, tolerance, control frames and specialized equipment.

AMT 124 **F,S** **Computer Numeric Control (CNC) Programming (2-2)** **3 Credits**

This course is designed to provide a working knowledge of basic CNC programming. Topics covered will include: Machine tool types, cutting concepts, machinability, saw processes, CNC operator panel, HMI panel, CNC program structure, monitoring and troubleshooting machines.

AMT 125 **F,S** **Computer Numeric Control (CNC) Milling (2-2)** **3 Credits**

This course is designed to provide a working knowledge of basic operation of CNC milling. Topics covered will include: Milling machines, tooling, work holding, manual control and program execution.

AMT 126 **F,S** **Computer Numeric Control (CNC) Turning (2-2)** **3 Credits**

This course is designed to provide a working knowledge of basic operation of CNC turning. Topics covered will include: Turning machines, turning operations, linear and circular interpolation. Students will be instructed on the components of and the proper operation of the lathe turning machine.

AMT 132 **F,S** **Industrial Hydraulics (2-2)** **3 Credits**

This course is designed to provide a broad range of basic information and hands-on practice to beginning students in manufacturing hydraulics. Topics covered will include hydraulic power systems, basic hydraulic circuits, principles of hydraulic pressure and flow, hydraulic speed control and pressure control circuits. Students will design, build, test, troubleshoot, and repair a typical hydraulic system. A course fee will apply. (Prerequisites: AMT 111)

AGRICULTURE

For Veterinary Science Courses see Veterinary Technology

Poultry Science courses have a POSC prefix and are listed alphabetically in this section

AMT 142 **F,S**
Manufacturing Mechanics (2-2) **3 Credits**
This course is designed to provide the students with basic knowledge of automated manufacturing power transmission and conveyance devices. Topics covered will include: belt drives, chain drives, bearing types, precision shaft alignment, types of seals, lubricants, product conveyance devices and gear reduction. A course fee will apply.

AMT 162 **F,S**
Industrial Process Control I (2-2) **3 Credits**
This course is designed to provide a broad understanding of Industrial Process Control as it relates to automated manufacturing. A commercially available hands-on trainer coupled with online course content will be used to cover industrial safety, interpretation of schematics, loop controllers, current to pressure converters, instrument calibration, and automatic control methods. A course fee will apply. (Prerequisites: AMT 102 or permission of instructor)

AMT 182 **F,S**
Introduction to Automated Robotics (2-2) **3 Credits**
This course is designed to provide a working knowledge of industrial robotics. Topics covered will include: robotic and industrial safety, applications, manipulators, end effectors and beginning programming examples. A course fee will apply. (Prerequisites: AMT 102)

AMT 204 **F,S**
Programmable Logic Controllers (2-2) **3 Credits**
This course is designed to provide a working knowledge of Programmable Logic Controllers (PLCs) with hands-on practice for students in the various technical programs. Topics covered will include: PLC operation, applications, configuration, programming examples, and troubleshooting. A course fee will apply. (Corequisites: AMT 102, AMT 104 or Permission of Instructor)

AMT 206 **F,S**
Programmable Logic Controllers II (2-2) **3 Credits**
This course is designed to provide advanced training in programmable logic controllers as they are used in industry to manage multiple automated processes. This is the second course covering programmable logic controllers (PLCs) and will provide a working knowledge of current industry applications. A course fee will apply. (Prerequisites: AMT 204 or Permission of Instructor)

AMT 284 **F,S**
Automated Robotic Programming (2-2) **3 Credits**
This course is designed to provide advance level knowledge of industrial robotic programming. Topics covered will include the utilization of special "teach pendant" accessories for remote programming, robotic axis interfacing, and program optimization relative to cycle times and other functions. Students will practice the interchange and calibration of various system components on a robotic trainer and modify "pick and place" programs using override function keys. This specialized training will give the students more advanced experience in the robotic field of study. A course fee will apply. (Prerequisites: AMT 182)

AMT 290 **F,S**
Manufacturing Internship (0-7.5) **3 Credits**
This course provides direct hands-on experience in a structured environment under the direct supervision of experienced tradesmen employed by a hosting organization. The course requires that 120 clock-hours be spent at the hosting location(s) during the term of study. (Prerequisites: Sophomore Standing (i.e. Completed 28 semester hours) or Permission of Instructor)

INTC 197, 198, 199, 297, 298, 299
Topics in Industrial Technology (0-8 to 3-0) **1-3 Credits**
This is a variable content course with areas of study that reflect current needs of individual students in the area of Industrial Technology. Topics are identified in the course description. (Prerequisite: Permission of instructor)

AGEC 123 **F,S**
Principles of Agriculture Econ (3-0) **3 Credits**
This course is an introduction to fundamental principles of microeconomics with emphasis on application to agriculture; adjustment to forces by consumers, farmers and businessmen planning, producing, marketing, and consuming products. (Prerequisites: Placement scores that indicate a readiness for MATH 100 or higher)

AGEC 213 **F**
Farm Business Management (3-0) **3 Credits**
Economics and management principles are applied in this course to planning and operating agricultural farms and businesses. Consideration is given to decisions involved in the organization and operation of the business and the correct use of available information in making decisions. Attention is given to problems of labor management, mechanization, rental arrangements, contract farming and credit financing for different sizes and types of agricultural businesses. (Prerequisite: AGECE 123 or permission of instructor)

AGEC 223 **F,S**
Agriculture Computer Applications (2-2) **3 Credits**
This course covers computer use in the workplace with emphasis on agribusiness situations. Computer applications including word processing, spreadsheet, databases, and presentation managers will be covered. Also included will be accessing information through the Internet and World Wide Web, telecommunications, an introduction to web page design and other software appropriate to agribusiness.

AGMC 205 **F**
Agricultural Mechanics (2-2) **3 Credits**
This course provides students instruction in basic agricultural skills that are required in various occupational areas related to the production of agricultural commodities. The course will cover basic metal working, carpentry, electricity, plumbing, preventive maintenance, and combustion engine operation. This course is a prerequisite for Supervised Occupational Experience 212.

AGRI 105 **Upon Request**
Problems in Agriculture (1-0) **1 Credit**
This course provides an opportunity for students to participate in directed problems and research in an area of special interest from the field of agriculture business, ag engineering, crops, horticulture, soils and livestock.

AGRI 106 **Upon Request**
Problems in Agriculture (2-0) **2 Credits**
This course provides an opportunity for the students to participate in directed problems and research in an area of special interest from the field of agriculture business, ag engineering, crops, horticulture, soils and livestock.

AGRI 107 **Upon Request**
Problems in Agriculture (3-0) **3 Credits**
This course provides an opportunity for the students to participate in directed problems and research in an area of special interest from the field of agriculture business, ag engineering, crops, horticulture, soils and livestock. A course fee will apply.

AGRI 108 **Upon Request**
Problems in Agriculture (4-0) **4 Credits**
This course provides an opportunity for the students to participate in directed problems and research in an area of special interest from the field of agriculture business, ag engineering, crops, horticulture, soils and livestock.

AGRI 111 **F,S**
Ag Career Orientation (1-0) **1 Credit**
This course is required for all agriculture degree-seeking students within their first semester of enrollment at Crowder College. Transfer students that have successfully completed a similar college

orientation course elsewhere or have a cumulative grade point average of 2.0 on a minimum of 12 credits are exempt from this course. This course is designed to provide students with information they will need to function as a Crowder College student, as well as career exploration and the identification of personal short and long term goals the student will need to be successful.

AGRI 123 *Upon Request*
Agriculture Chemicals (3-0) **3 Credits**

This course will introduce principles of the safe use, handling, and storage of chemicals that are needed in the production and storage of plant and animal products, along with the impact of agricultural chemicals on the environment.

AGRI 190 *F,S*
World Food and Society (3-0) **3 Credits**

A study of economic issues in international agriculture including the world food problem, agricultural development, agricultural and food trade and policy, food production and distribution and its relationship to societal advancements in developed and developing nations. (Prerequisite: ENGL 101)

AGRI 202 *S*
Agriculture Capstone (2-0) **2 Credits**

This course is designed for all agricultural majors with emphasis on job placement. Areas of discussion include goal setting, leadership development, human relations, résumé development, interview skills development, making transitions, team dynamics, and exit interviews.

AGRI 204
Internship in Agriculture (0-0) (180 contact hours) **4 Credits**

The student will receive on-the-job experience in a designated training site. The student will apply his or her training in an occupational setting, applying previous learned skills and knowledge to the work place. (Prerequisite: AGRI 202 or permission from instructor)

AGRI 212, 222
Supervised Occupation Experience (SOE) (1-0) **1 Credit**

Students majoring in Agri-Business or Farm Management must enroll in one credit hour SOE experience per semester. Those without a part-time job in their field of training may get SOE credit on the college farm with 40 clock hours of work experience per semester.

AGRI 223 *S*
Public Relations in Agri-Business (3-0) **3 Credits**

This course addresses the principles and techniques used to create and maintain public good will and acceptance are analyzed. Emphasis is placed on how business functions in the interests of society, and on the process of creating a favorable image in the public mind.

AGRI 233 *F,S,SU*
Travel Seminar in Agriculture (0-6) **3 Credits**

This course is for all agriculture majors with an emphasis in exposing students to a broad spectrum of agricultural production, processing, and marketing outside of the four-state region. The course is comprised of a week of travel to a predetermined region of the U.S. and focuses on the major agricultural activities found in that region. Students are required to keep a daily journal of the seminar and after seminar, complete a written summary based on the journal. Course will be graded as a "pass" or "fail" only. A course fee will apply. (By permission of instructor)

AGRI 299 *F,S,SU*
Topics: Travel Credit (0-6) **3 Credits**

This class provides students the opportunity to see a variety of production, processing and marketing agricultural strategies not found in the Four State area. Students will be travelling from 7 to 12 days. They are required to research and write a paper on assigned topics determined by the region which will be toured. A daily journal is required of the travel time as well as a summary paper to be written after the travel is completed. Travel may include national and/or international destinations. Course will be graded as a "pass" or "fail" only. A course fee will apply. (Prerequisite: AGRI 233 or permission of the instructor)

AGRN 113 *F,S*
Crop Science (2-2) **3 Credits**

This course provides students with principles of production and management of various grain and forage crops. The nature, importance and ecology of various crop plants are discussed. The laboratory includes identification and study of plants and plant parts.

AGRN 121 *S*
Crop Evaluation (0-2) **1 Credit**

Students become proficient in crop, weed, and disease identification, seed analysis, and grain grading through extended lab experience. (Prerequisite: AGRN 113 or *permission of the instructor*)

AGRN 214 *F,S*
Fundamentals of Soil Science (3-2) **4 Credits**

This course presents basic concepts of all aspects of soil science including: composition and genesis; physical, chemical, and biological properties; soil water; classification and mapping; soil conservation and management practices; soil fertility and productivity (liming, nature and use of fertilizers and manures, and soil testing). It also introduces the relationship of the soil to current concerns such as environmental and water quality in both agriculture and non-agricultural land uses.

AGRN 221 *S*
Soil Evaluation (0-2) **1 Credit**

Soil Evaluation is a field-laboratory oriented course that focuses on the techniques used to (1) describe soil morphology and site and profile characteristics, (2) make land use interpretations based on soil characteristics, and (3) classify soils. (Prerequisite: AGRN 214 or permission of the instructor)

AGRN 223 *F (even years)*
Grain Crops (3-0) **3 Credits**

This course is a detailed study of the botany, origins of domesticated types, cultivation, adaptation, distribution, production practices and utilization of cereal grain crops. (Prerequisite: AGRN 113)

AGRN 243 *S (odd years)*
Forage Crops (3-0) **3 Credits**

This course is a study of the major crops grown for forages and their identification, culture, management, preservation and utilization. (Prerequisite: AGRN 113)

ANSC 101, 121 *S*
Livestock Selection (0-2) **1 Credit**

Students practice judging: oral and written discussions on beef cattle, dairy cattle, swine, sheep and horses for competition. (Prerequisite: Permission of the Instructor)

ANSC 114 *F,S*
Animal Science (3-2) **4 Credits**

This course is an introduction to the livestock industry. Fundamental and essential concepts of livestock production, selection and its relation to production, types, market classes, and grades of cattle, swine, sheep and goats.

ANSC 153 *S (Odd Yrs)*
Beef Cattle Production (2-2) **3 Credits**

Students will learn breeding, feeding, management and marketing of commercial and seed stock beef cattle. (Prerequisite: ANSC 114 or permission of instructor)

ANSC 180 *F,S*
Introduction to Veterinary Science (2-0) **2 Credits**

This course will begin with a brief study of the professions of veterinary medicine. Basic cell structure, tissue types, and body systems will then be covered, with practical application to common animal diseases. Animal hospital procedures and animal handling will be introduced. This course will serve as preparation for those interested in working in veterinary medicine or having an interest in application to the Veterinary Technology program at Crowder College or to a college of veterinary medicine to pursue a doctorate degree. (Prerequisite: Taking BIOL 101 or 110 prior to or at the same time as taking this course is recommended)

ANSC 203 **F**
Meat Science and Products (1-4) **3 Credits**
 This course covers the processing, grading, inspection, preservation, nutritive value and economical value of meats and meat products.

ANSC 213 **S**
Feeds and Nutrition (3-0) **3 Credits**
 Students will learn the principles of animal nutrition, feed composition and formulation of balanced livestock rations and feeding of farm animals, including the various feed nutrients and their functions, digestion, and metabolism.

ANSC 223 **F**
Farm Animal Health (3-0) **3 Credits**
 This course is designed to explain the role of animal scientists, veterinarians and farm managers in the control and prevention of farm animal diseases and parasites. It also provides an understanding of different types of diseases, their causes, identification, diagnosis and treatment of sick animals. (Prerequisite: ANSC 114)

ANSC 232 **F**
Artificial Insemination and Reproduction (2-2) **3 Credits**
 This course provides practical application of artificial insemination in cattle. This covers structure and function of the reproduction system of domestic animals, semen handling, processing and preservation. A course fee will apply. (Prerequisite: ANSC 114 or permission of instructor)

ANSC 233 **S**
Horse Science (3-0) **3 Credits**
 This course is designed to introduce the horse industry and to study fundamental problems and essential concepts of horse production, brood mare management, selection and judging of horses.

Poultry Science courses have POSC prefix and are listed alphabetically in this section

HORT 101 **As Needed**
General Horticulture (3-0) **3 Credits**
 This course surveys the general field of horticulture with emphasis on the growth and fruiting habits of horticulture plants. Principles and practices of propagation, fertilization, pest control, pruning and landscaping, turf planting, care and culture of fruit, vegetables, and ornamental crops are included.

HORT 103 **As Needed**
Floriculture (2-2) **3 Credits**
 This course covers production and management of greenhouse floriculture crops and herbaceous landscape plants with principles and practices of floriculture design and marketing. Basics guidelines and principles of floral design are discussed including; balance, composition, harmony, focal point, proportion, line, rhythm, texture, form, space, and color.

HORT 113 **S**
Greenhouse Management (1-4) **3 Credits**
 This course focuses on factors involved in site selection, construction and management of greenhouses for the production of horticulture crops.

HORT 204 **As Needed**
Nursery Management/Landscape and Design (3-2) **4 Credits**
 General principles and practices involved in the commercial production, management and marketing of landscaped plants and the fundamental principles of landscape design with practical exercises in planning and preparing master planting plans and cost estimates for the home grounds. Field trips will be required.

POSC 101 **F,S**
Poultry Judging & Selection I (0-2) **1 Credit**
 This course is an introductory training of students to judge live chickens and turkeys, ready to cook chickens and turkeys, and interior and exterior quality of eggs.

POSC 104 **S (even years)**
Introduction to Careers in Poultry Science (0-4) **2 Credits**
 This course allows students to become familiar with career opportunities associated with the poultry industry, the allied poultry industry, as well as regulatory and research entities. This class includes field trips, lectures, quest speakers, interviews, oral presentations, and written reports. (Prerequisite: ANSC 114)

POSC 105 **F (even years)**
Avian Biology (2-0) **2 Credits**
 In this course, students will be introduced to the biological sciences associated with poultry. Topics will include avian origin, types of domestic poultry, basic anatomy/physiology, poultry care/husbandry, and behavior. This course will serve as a foundation for poultry production classes. (Prerequisite: ANSC 114 or Permission of Instructor)

POSC 201 **F,S**
Poultry Judging & Selection II (0-2) **1 Credit**
 This course expands the selection and judging process to compete with other schools in national contests.

POSC 206 **F,S,SU**
Poultry Internship (0-0) (135 Contact Hours) **3 Credits**
 This internship requires students to apply their training to a real life company who gives management trainee experience and hands-on problem solving opportunities.

ALLIED HEALTH

ALLH 103 **S**
Home Health Aide (3-0) **3 Credits**
 Home Health Aide teaches basic nursing care for the disabled, chronically ill, cognitively impaired, and older adults who may need assistance living in their own homes or in residential facilities. The basic nursing skills taught include communication skills, infection control, safety and emergency procedures, and basic personal care skills. (Co-Requisite: ALLH 104)

ALLH 104 **S**
Home Health Aide Clinical (0-2.5) **1 Credit**
 Home Health Aide Clinical provides practical experience for the student in basic nursing care for the disabled, chronically ill, cognitively impaired, and older adults who may need assistance living in their own homes or in residential facilities. This includes communication skills, infection control, safety and emergency procedures, and basic personal care skills. This course requires 40 hours of clinical field work. (Co-Requisite: ALLH 103)

ALLH 106 **F,S**
Phlebotomy Techniques (3-0) **3 Credits**
 Phlebotomy Techniques is a course that introduces the student to phlebotomy, proper venipuncture procedures, and laboratory tests. The course will be conducted as a combination lecture/lab class where students are introduced to the concept and then given opportunity to develop the basic skills.

ALLH 107 **F,S**
EKG (3-0) **3 Credits**
 EKG is a course that introduces the student to electrocardiography (EKG), proper lead placement, and normal and abnormal heart rhythms. The course will be conducted as a combination lecture/lab class where students are introduced to the concept and given the opportunity to develop the basic skills. A course fee will apply.

ALLH 110 **F,S**
Patient Care Technician (3-0) **3 Credits**
 This course is a preparatory course to develop in students the personal traits and professional skills required to perform as competent entry-level patient care technicians (PCT) in the hospital setting. This course will introduce students to providing basic patient care, obtaining EKG readings, monitoring vital signs, perform phlebotomy procedures, and providing emotional support to patients and families.

ALLH 115 **Community Health Worker (7-2)** **F,S**
9 Credits
 This course helps bridge the gap between healthcare providers and underserved populations in need of care. They are a trusted member of and/or have a close understanding of the community served. A CHW serves as a link between the patient and health or social service agencies to improve access to services, quality of care, and strive to improve health outcomes. Throughout this course, students will participate in discussions, collaborative projects, and an on-site clinical shadowing experience as they learn how to provide quality public service, how to navigate local community resources, as well as develop a deeper understanding of specific community-based cultural beliefs.

ALLH 130 **Basic Pharmacology (3-0)** **F**
3 Credits
 This course discusses current medications being used and the mechanism of action. Discussion of the way medications are absorbed, metabolized, distributed, and excreted will be included. The student will review the physiology of major body systems and explore the interaction of medications with individual systems

ALTERNATIVE ENERGY

ENER 105 **Introduction to Energy (3-0)** **F,S**
3 Credits
 Introduction to Energy is a survey course that presents key concepts that are applicable to alternative and renewable energy resources and the technology needed to harvest them. The course also considers their potential as an energy source, energy production, environmental concerns and other factors needed to make informed decisions about alternative and renewable energy systems. Topics include solar energy, bioenergy, wind, hydroelectricity, tidal power, wave energy and geothermal energy. Course is offered at the Neosho campus in the Fall and online in the Spring. A course fee will apply.

ENER 156, 157, 158 **Projects in Alternative Energy** **F,S**
1-3 Credits
 This course offers additional experience in solar or wind technology design and application. The course will be tailored toward a student's focus/need. This course may be offered in conjunction with a solar or wind project and/or internship. (Course content varies by semester.)

ENER 221 **PV Grid-Tied Electric Systems (2-2)** **F,S**
3 Credits
 This course presents the key components of photovoltaic (PV) conversion systems to produce electricity from sunlight. Solar module types and properties, balance of system components for utility interface, energy management, and economics for a variety of PV applications are studied. This course includes details of installation, operation, and evaluation of photovoltaic systems that are connected to the existing electrical system. Students will participate in a team-based design project. This course will include preparation for the NABCEP (North American Board of Certified Energy Practitioners) PV Associate exam. The lab component provides hands-on experience with the key components of utility interconnected photovoltaic conversion systems to produce electricity from sunlight. (Prerequisite: Placement scores must indicate proficiency level of MATH 100 or higher or have completed MATH 50)

ENER 222 **PV Battery-Based Electric Systems (2-2)** **F,S**
3 Credits
 Solar Electric Energy presents the key components of battery-based photovoltaic (PV) conversion systems to produce electricity from sunlight. Solar module types and properties, balance of system components, for stand-alone systems. B-modal energy management, and economics for a variety of PV applications are studied. This course includes details of installation, operation, and evaluation of stand-alone and multi-modal photovoltaic systems. Students will participate in a team-based design project. This course includes preparation for the NABCEP (North American Board of Certified Energy Practitioners) PV Associate exam. The lab component provides hands-on experience with the key components of battery-based PV conversion systems to produce and store electricity from sunlight. (Prerequisite: Placement scores must indicate proficiency level of Math 100 or higher or have completed MATH 50)

ENER 256, 257, 258 **Projects in Alternative Energy** **Upon Request**
1 Credit (1-1); 2 Credits (1-2); 3 Credits (2-2)
 This course offers additional experience in solar or wind technology design and application. The course will be tailored toward a student's focus/need. This course may be offered in conjunction with a solar or wind project and/or internship. A course fee will apply. (Course content varies by semester.)

ENER 265 **Alternative Energy Marketing & Project Mgmt (2-2)** **F,S**
3 Credits
 This course provides an overview of various alternative energy marketing techniques and management responsibilities not related to the physical installation of systems. This course introduces students to the Photovoltaic (PV) Marketing industry in general and the overall concepts of alternative energy project management and economics. Topics covered in the course include authority having jurisdiction (AHJ) permitting, interconnection agreement completion, entrepreneurship, marketing ethics, business and customer financing, lead generation, customer service, and inventory management. Students will create personal sales presentation and participate in a live sales call to a potential customer. (Prerequisites: ENER 221 & ENER 222 or Permission of Instructor)

ART & DESIGN

ART 101 **Art Appreciation (3-0)** **F,S,SU**
3 Credits
 This course is a survey of major concepts in the visual arts and their relation to the societies that produced them. Art Appreciation is an introduction to the history of art, contemporary art, art theory, artworks, media, and creative processes. The student will develop an increased appreciation for the visual arts, the usage of media as a means of communication, and the parallel relation to specific styles, periods and cultures. This course partially fulfills Humanities general education requirements. (Will NOT satisfy core for Art & Design majors) A course fee will apply.

ART 103 **Introduction to 2-D Design (2-4)** **S**
3 Credits
 This comprehensive visual arts foundation course introduces 2-D design theory. The studio and lecture presents the elements of composition, principles of organization and color theory. Contemporary and historic models of expression are explored with an emphasis on creativity. (Required core for Art & Design majors) A course fee will apply.

ART 104 **Introduction to 3-D Design (2-4)** **F**
3 Credits
 This comprehensive visual arts foundation course introduces three-dimensional design theory. The studio and lecture course presents the elements of art and principles of design as applicable to three-dimensional forms. The aesthetics of contemporary and historic models of expression are explored with an emphasis on creativity. (Required core course for Art & Design majors) A course fee will apply.

ART 105, 205 **Topics in Art (1-3)** **F**
3 Credits
 Variable content, appropriate to student needs, is included in this elective course. Lectures and/or studio projects in the fields of art history, computer art, design, drawing, fibers, graphic design, ceramics, sculpture, painting, and current art subjects may be used. (This course may not be used to fulfill a major in art requirement. Consult the registration schedule for specific topics when class is offered) A course fee may apply.

ART 106 **Drawing I (2-4)** **F,S**
3 Credits
 Drawing I is a beginning level, fundamental art department course investigating a variety of media, techniques and subjects. The course explores perceptual and descriptive possibilities with consideration to drawing as a developmental process as well as an end in itself. (Required core for Art & Design majors) A course fee will apply.

ART 107**Painting I (2-4)****3 Credits**

Painting I highlights composition and visual concepts through historical and contemporary applications. Visual elements and design principles are investigated in directed studies, which include the still life, landscape, portrait, abstract, and non-objective concepts. Drawing and design skills are emphasized. (Required core for Art & Design majors) A course fee will apply.

ART 110**Ceramics I (2-4)****F,S****3 Credits**

This course introduces Ceramics through hand-built and wheel-thrown methods of construction. Clay and glaze preparation, construction techniques, and use of the potter's wheel are emphasized. The historic and theoretic applications of clay design and ceramics as a fine art medium are explored through sculptural and functional applications. (Required core for Art & Design majors) A course fee will apply.

ART 111**Sculpture I (2-4)****S****3 Credits**

Sculpture I introduces the fundamental development of three-dimensional design forms. Sculptural and environmental relationships are explored. Expressive concepts are encouraged with various media and techniques. (Required core for Art & Design majors) A course fee will apply.

ART 119**Printmaking I (2-4)****F****3 Credits**

Printmaking I examines the technical processes, applications, and avenues of creative expression inherent to the methods of monotype, relief, intaglio, and mixed media printmaking. These distinctive procedures revolve around processes of manual printing; in black and white, as well as in color, through directed projects and personal experimentation. The historic, theoretic, and contemporary applications of printmaking as a unique art form are investigated and discussed alongside the physical production of fine art prints. Drawing, design principals, craftsmanship, and conceptual development are strongly emphasized and will be cultivated throughout all stages of the course. (Prerequisite: ART 103 & ART 106 are recommended)

ART 189**Photography (2-4)****F****3 Credits**

Introduction to digital photography and image editing emphasizing the technical and aesthetic issues and how these qualities inform image content. Control of camera settings, natural and studio lighting, and basic Photoshop editing is explored as well as career options in digital photography. A final printed and digital portfolio will be prepared. Students enrolled in the course must own a digital camera. Lab fee required.

ART 206**Drawing II (2-4)****F,S****3 Credits**

Drawing II is an intermediate level fundamental art and design course investigating a variety of media, techniques and subjects, exploring perceptual and descriptive possibilities with consideration of drawing as a developmental process as well as an end in itself. A course fee will apply. (Prerequisite: ART 106 or permission of the instructor)

ART 207**Painting II (2-4)****S****3 Credits**

Painting is continued with more advanced theories. Design problems include greater visual and conceptual complexity. Individual styles, personal drawing and painting techniques are emphasized in directed studies. Historical and contemporary aesthetics are explored through lecture, discussion and application. A course fee will apply. (Prerequisite: ART 107 or permission of the instructor)

ART 210**Ceramics II/Pottery (2-4)****S****3 Credits**

A continuation of Ceramics I, this course is offered to students who wish to continue their studies in ceramics and fine art. An advanced exploration of materials and processes associated with clay, glaze, and firing operations are emphasized. Students will develop their own concepts through advanced studies in aesthetic, historical, functional, and sculptural ceramic applications. A course fee will apply. (Prerequisite: ART 110 or permission of the instructor)

ART 211**Sculpture II (2-4)****3 Credits**

A continuation of sculptural form features more advanced three-dimensional design theories. Aesthetic mass and space relationships utilize a wide range of materials and techniques. A course fee will apply. (Prerequisite: ART 111 or permission of instructor)

ART 219**Printmaking II (2-4)****S****3 Credits**

This course focuses on the refinement and expansion of printing methods previously studied in Printmaking I. Potential techniques include: intaglio, relief, lithography, monoprint, monotype, digital, and mixed media practices. The historic, theoretic, and contemporary applications of printmaking as a unique art form are further investigated and discussed alongside the manual production of fine art prints. Students will begin to cultivate an individual and distinct approach to printmaking that supports their personal skill set and developed interests. Personal mark-making, design principals, craftsmanship, portfolio building, and conceptual development are strongly emphasized and will be cultivated throughout all stages of the course. (Prerequisite: ART 119)

AUTOMOTIVE TECHNOLOGY

AUTO 114**Auto Fuel Systems (2-4)****F****4 Credits**

A course designed for the automotive student or practicing automotive technician. Areas of study will include engine air/fuel requirements, tanks and lines, evaporative controls, fuel pumps and filters, air cleaners, electronic engine management and electronic fuel injection systems. Emphasis is given to emission control and electronic engine management systems. Practice is provided with live service and repair in the automotive laboratory. A course fee will apply.

AUTO 115**Engine Repair (2-6)****F****5 Credits**

Engine Repair is designed to teach the student accepted methods of service and repair of the engine and related systems: engine overhaul, cooling, lubrication, fuel, ignition and exhaust systems. It includes instruction in tool selection, usage, maintenance, and shop safety. Practice is provided with live service and repair in the engine repair laboratory. A course fee will apply.

AUTO 124**Automotive Brake Systems (2-4)****S****4 Credits**

A course designed for the automotive student or the practicing automotive technician. This course is a study of the principles involved in the braking systems of the modern automobile. Instruction is given in the skills needed to diagnose and repair braking systems. Special emphasis is given to hydraulic theory, computerized anti-lock systems and the use and application of modern test equipment in the diagnosis and repair of these systems. A course fee will apply.

AUTO 125**Automotive Electrical Systems (2-6)****S****5 Credits**

This is a concentrated course in automotive electrical systems. Included is a review of basic electrical principles. Systems studied include charging, starting, ignition, lighting and fuel. Emphasis is given to electronic ignition and electronic fuel injection. Practice is provided with live service and repair in the automotive laboratory. A course fee will apply.

AUTO 197,198, 199, 297, 298, 299**Topics in Automotive Technology (0-8 to 3-0)****1-3 Credits**

This is a variable content course with areas of study that reflect current needs of individual students in the area of Automotive Technology. Topics are identified in the course description. A course fee will apply. (Prerequisite: Permission of instructor)

AUTO 214**Automotive Air Conditioning (2-4)****F****4 Credits**

A course designed for the automotive technology student or the practicing automotive technician. A general introduction to the principles of automotive heating and air conditioning systems. The application of major components and control systems to automobiles is taught. Practical servicing, overhaul and replacement of units are emphasized, as are the recent changes in refrigerant and refrigerant

handling. A course fee will apply.

AUTO 215 **F**
Automotive Emission Control Systems (2-6) **5 Credits**

A course designed for the automotive technology student or the practicing automotive technician. The course is designed to give the student a working knowledge of, and practical experience in, the diagnosis and repair of automotive emission control systems. Emphasis is given to the electronic control systems found on later model vehicles. Practical experience is provided with live service and repair in the automotive laboratory. A course fee will apply.

AUTO 223 **S**
Automotive Power Train Systems (2-2) **3 Credits**

A course designed for the automotive technology student or the practicing automotive technician. The theory of operation, design construction and malfunction diagnosis of power transmitting units: clutches, standard and automatic transmissions, drivelines, differentials and rear axles. A course fee will apply.

AUTO 224 **S**
Computerized Engine Control (2-4) **4 Credits**

A course designed for the automotive technology student or the practicing automotive technician. A study in the principles of computerized engine control, the course will help the student/technician to grasp the operation, diagnosis and repair of these complicated systems. The use and application of modern test equipment are taught in relation to their use in the diagnosis and repair of these systems. A course fee will apply.

AUTO 225 **S**
Automotive Suspension and Steering (2-6) **5 Credits**

A course designed for the automotive technology student or the practicing automotive technician. This class is a study of the principles involved in the steering and suspension mechanisms of the modern automobile. Instruction is given in the skills needed to diagnose and repair steering and suspension components, replace steering and suspension system components and alignment of the wheels. The application of modern equipment is taught in relation to its use in the repair of these systems. A course fee will apply.

AUTO 240 **F,S**
Auto Tech Internship (0-3 to 0-13) **1-5 Credits**

This phase of the student's training includes work experience in an automotive business with weekly discussions of various on-the-job problems. (One credit per forty work hours)

AUTO 241, 251
Problems in Automotive Technology (0-2) **1 Credit**

This class provides an opportunity for students to participate in independent study and research in their field of special interest within automotive technology. A course fee will apply. (Prerequisite: permission of instructor) (One credit may be earned in each of two semesters)

BIOLOGY

BIOL 101 **F,S, SU**
General Biology (3-2) **4 Credits**

This introductory course explores the unifying principles of living organisms at the chemical, cellular, organismal, and population levels of organization, and includes cell structure and function, metabolism, genetics, evolution and ecology. Emphasis will be placed on core biological principles and human interactions with the natural world, as well as the possible outcomes of these interactions. A practical laboratory component emphasizes scientific investigating and supports lecture material. The course satisfies the life science general education requirement for the Associate of Arts degree.

BIOL 102 **F,S**
Biological Concepts (3-0) **3 Credits**

This course is an introduction to the study of biology and covers principles of life science from the chemical basis of life to the interactions between living organisms and their environment. The unifying biological principles of cell structure and function, genetics, development, metabolism, reproduction, and ecology are addressed. This course fulfills the life science general education requirement.

BIOL 110 **F**
General Zoology (3-4) **5 Credits**

General Zoology introduces Kingdom Animalia, surveying the diversity of the kingdom with an emphasis on the classification and ecology of major animal groups. Animal-like Protists are also discussed. Topics include evolution, natural and sexual selection, symbiotic relationships, and environmental issues relating to members of the animal kingdom. General Zoology is a requirement for the biology degree. (Prerequisite: BIOL 101; or ACT Composite Score 23 or above; or two years high school biology)

BIOL 120 **S**
General Botany (3-4) **5 Credits**

General Botany is an introduction to the discipline of botany and includes the study of plants, algae, fungi, and bacteria. Topics covered include principles of cell biology, fundamentals of metabolism, basic plant anatomy and physiology, plant taxonomy, a systematic survey of the plant kingdom, and ecology. An extensive laboratory section supports and extends the lecture material. General Botany is a requirement for the biology degree. (Prerequisite: BIOL 101; or ACT Composite Score 23 or above; or two years high school biology)

BIOL 152 **F,S,SU**
Human Anatomy & Physiology I (4-2) **5 Credits**

Human Anatomy and Physiology I is the first course in a two-course sequence, covering the unifying principles of biochemistry, cell structure and function, genetics, development, and metabolism, as well as the structure and function of various organ systems of the human body. A practical laboratory component emphasizes inter-relationships between systems and how the entire body functions as a unit. This course is required for students entering health-related professions but is not recommended for science majors. This course fulfills the life science general education requirements for some majors. (Prerequisite: College level reading, ACT score of 18, or comparable placement score)

BIOL 220 **F,S**
General Microbiology (3-4) **5 Credits**

This course addresses topics ranging from the biochemistry and molecular biology of viruses and bacteria to the epidemiology of human disease. General Microbiology presents a wide-ranging examination of the microbial world, with emphasis on the relationship between microorganisms and human health and disease. This course covers principles of microbiology including basic biochemistry, cell structure and metabolism, the cultivation and control of microorganisms, a survey of the microbial world, epidemiology, and host defense. General Microbiology is a requirement for nursing, and pre-professional degrees. (Prerequisite: BIOL 101, BIOL110, BIOL 120, or BIOL 152)

BIOL 252 **F,S**
Human Anatomy and Physiology II (3-4) **5 Credits**

Human Anatomy and Physiology II is the second course in a two-course sequence, covering the structure and function of various organs systems of the human body not covered in the Human Anatomy and Physiology I. These include the nervous, cardiovascular, lymphatic, respiratory, endocrine, digestive, urinary, and reproductive systems. A practical laboratory component emphasizes inter-relationships between systems and how the entire body functions as a unit. This course is required for students entering health-related professions but is not recommended for science majors. (Prerequisite: BIOL 152)

BIOL 260, 261, 262, 263 **SDL, Upon Request**
Problems in Life and Health Sciences (1-0) **1 Credit**

This course gives interested students an opportunity to work on a special project in Biology, typically beginning research. (Prerequisite: BIOL 220 or Permission of the instructor)

BUSINESS ADMINISTRATION

BSAD 103 **S**
Professional Development (2-0) **2 Credits**

This course is centered around the technique and personal qualities students need to find and keep the best possible job. We will also address common employer concerns and provide basic skills for success on the job. Course work centers primarily in the business

fields. (Sophomore level)

BSAD 108
Personal Finance (3-0)
Consumer finance topics are designed to provide students with guidance in handling such everyday problems as taxes, insurance, buying a home or automobile, borrowing, saving, social security, budgeting and estate planning.

F,S,SU
3 Credits

BSAD 110, 111, 210, 211
Leadership Development and Service Learning (1-0)
This course provides leadership experience through participation in a student business organization. Students elect to participate in activities such as the following: individual or group research projects, panel discussion, and promotional projects. (May be taken each of four semesters)

F,S

1 Credit

BSAD 115
Computer Concepts (3-0)
This course provides an introductory study of computer topics. Students completing this course will have a solid understanding of basic computer concepts, networking, using a personal computer, accessing information using the Internet, sending and receiving email, managing computer files, and utilizing operating system tools. In addition, the student will be introduced to productivity software including word processing, spreadsheets, and presentation software. No prior experience with computers is assumed.

F
3 Credits

BSAD 121
Business Mathematics (3-0)
This course teaches the application of business math used in accounting, finance, management, consumer economics, and retailing. Fundamental concepts addressed are interest, bank discount, payrolls, and markup. Also, the students will learn the touch system and principles of the electronic calculator.

F
3 Credits

BSAD 125
Computer Applications (3-0)
Students are introduced to word processing, database and spreadsheet and presentation applications. Learning is enhanced through the use of current business software and hands-on experience with PC-compatible computers. Students must have access to the version of Microsoft Office being used at Crowder College. This includes Word, Excel, Access, and PowerPoint. Software used in this course is best suited within a Windows environment.

F,S,SU
3 Credits

BSAD 130
Business Communications (3-0)
Effective communication techniques as applied in business correspondence and reports are taught in this course. (Prerequisite: ENGL 100 or higher)

F,S
3 Credits

BSAD 150
Introduction to Business (3-0)
This course surveys American business enterprises. Emphasis is on the characteristics, functions and problems of modern business.

F,S,SU
3 Credits

BSAD 197, 198, 199, 297, 298, 299
Topics in Business Administration (1-3)
A variable content course with topics that can change from semester to semester. Topics are identified by title in the class schedule. This course may be repeated if the topic is different to a total of six hours.

As Needed
1-3 Credits

BSAD 218
Advanced Excel (3-0)
This course allows students to refine their skills in spreadsheet applications. Microsoft Excel will be used to teach advanced concepts in this software package. The course will include applying concepts to real life situations. (Prerequisites: BSAD 125)

S
3 Credits

BSAD 230
Business Law (3-0)
Business Law covers legal principles operative in common business situations, including the law of contracts, agency and business organization.

F,S
3 Credits

BSAD 236
Business Statistics (3-0)
Business Statistics addresses the collection, analysis, interpretation, and presentation of data related to business. Topics include measures of central tendency and dispersion, frequency distribution, hypothesis testing, and sampling distribution. Spreadsheet software will be utilized in analysis of a variety of application problems. (Prerequisites: MATH 135)

3 Credits

OA 215
Medical Terminology (3-0)
This course introduces and explains basic medical terminology. Roots, combining vowels, prefixes and suffixes are examined. Basic anatomy, spelling and abbreviations are included.

F,S
3 Credits

CERTIFIED MEDICAL ASSISTANT

MEDA 111
Introduction to Medical Assisting (3-0)
This is an introductory course that provides a knowledge base for medical assistant's interaction with patients and other healthcare professionals in an ambulatory care setting, including entry level clinical care skills. This course covers basic principles of psychology and human growth and development; focuses on communication in the medical office/ambulatory care setting, and legal and ethical responsibilities in patient care and management. (Corequisites: MEDA 112, MEDA 113, MEDA 114, MEDA 115 & MEDA 116)

F,S
3 Credits

MEDA 112
Dosage Calculation & Medication Administration (2-0)
This course focuses on applications of basic mathematical principles in the medical office/ambulatory care setting. This course also provides instruction in the application of basic concepts required for medication administration: choice of equipment, proper techniques, hazards and complications, patient care; performance of intramuscular, subcutaneous, and intradermal injections; preparation and administration of oral medications; immunizations. (Corequisites: MEDA 111, MEDA 113, MEDA 114, MEDA 115 & MEDA 116)

F,S
2 Credits

MEDA 113
Medical Assisting Science (3-0)
This course covers basic concepts of human anatomy and physiology as well as medical terminology related to the body as a whole and to each major body system. It covers basic characteristics of disease and methods of control. The course includes an overview of pharmacology and medications used for disease prevention and treatment. This course also covers the application of basic nutrition principles to personal well and disease prevention. (Corequisites: MEDA 111, MEDA 112, MEDA 114, MEDA 115 & MEDA 116)

F,S
3 Credits

MEDA 114
Clinical Medical Assisting (3-0)
This course prepares the student to carry out clinical care procedures as an assistant to a physician in an ambulatory care facility setting. It also provides instructions in preparing for and performing routine and specialty medical office procedures, diagnostic tests, in-office/ambulatory surgical procedures, and follow-up care. (Corequisites: MEDA 111, MEDA 112, MEDA 113, MEDA 115 & MEDA 116)

F,S
3 Credits

MEDA 115
Administrative Medical Assisting (2-0)
This course presents basic concepts and applications of computers and computer systems in administrative medical assisting practice. The course provides instruction in administrative medical assisting practice in the front office, including transcription of medical reports and documentation, basic coding, and maintaining patient records and accounts. (Corequisites: MEDA 111, MEDA 112, MEDA 113, MEDA 114 & MEDA 116)

F,S
2 Credits

MEDA 116
Medical Assisting Clinicals (3-0)
This course provides an analytical approach to the correlation of theory and learned skills to practical experience in the delivery of quality patient care in the ambulatory healthcare setting. It provides clinical experience for the development of professional characteristics

F,S
3 Credits

as a practicing Medical Assistant. (Corequisites: MEDA 111, MEDA 112, MEDA 113, MEDA 114 & MEDA 115)

CERTIFIED NURSING ASSISTANT

MUST BE 18 TO START COURSE

CNA 101

CNA Techniques (5-0)

F,S
5 Credits

This course is a preparatory course to enable the student to work in a hospital, clinic, nursing home, or home health care setting providing basic nursing care. This course will introduce the student to the health care delivery system, health care team work, medical observation, documentation and reporting techniques, and patient assessment. Certified nursing assistants (CNA), also known as nurse's aides, orderlies, patient care technicians and home health aides, work under the supervision of a nurse and provide assistance to patients with daily living tasks. A course fee will apply. (Co-requisite: CNA 102 and must be 18 years old to start course)

CNA 102

CNA Clinical Experience (0-4)

F,S
2 Credits

This course is a clinical preparatory course to enable the student to gain experience in a hospital, clinic, nursing home, or home health care setting providing basic nursing care. This course requires 100 hours of clinical experience in the health care delivery system, health

CNA 120

Certified Medication Technician (4-0)

F
4 Credits

The Certified Medication Technician course is an expanded role of the Certified Nurse Assistant. This course is a preparatory course to prepare the individual for employment as a certified medication technician in an intermediate care or skilled facility. This course teaches skills in administration of non-parenteral medications that will qualify students to perform this procedure to assist licensed practical nurses or registered professional nurses in medication therapy. A course fee will apply. (Prerequisites: CNA 101; CNA 102 or Active CNA Certification; must be CNA for 6 months and have letter from director of nursing)

CHEMISTRY

CHEM 101

Survey of Chemistry (3-2)

4 Credits

This course for non-science majors satisfies part of the general education science requirement. The scope of the course is quite broad with emphasis on descriptive rather than theoretical chemistry. Topics illustrating the impact of chemistry on society and aspects of chemistry applicable to everyday living are taken from inorganic, organic and biochemistry. Credit may not be earned for both CHEM 101 and CHEM 104.

CHEM 104

Chemistry for Health Sciences (3-2)

F,S
4 Credits

This course for students planning to enter certain health fields satisfies part of the general education science requirement. The scope of the course is quite broad with emphasis on descriptive rather than theoretical chemistry. Topics are taken from inorganic, organic and biochemistry with emphasis on those concepts that have application in human health. Credit may not be earned for both Chemistry 101 and 104.

CHEM 111

General Chemistry I (4-2)

F
5 Credits

This class emphasizes the fundamental principles of chemistry. It includes a study of atomic and molecular structure, chemical bonding, stoichiometry, gases, liquids, solids, changes of state, solutions, colloids, chemical equilibria and acid-base chemistry. General Chemistry I is required of all science and engineering majors. (Co-requisite: MATH 135 or 150; high school chemistry or its equivalent is recommended)

CHEM 112

General Chemistry II (3-4)

S
5 Credits

A continuation of Chemistry 111, this course includes a study of oxidation reduction reactions, electrochemistry, thermodynamics,

kinetics, nuclear chemistry, and a survey of inorganic chemistry. The laboratory includes qualitative analysis. (Prerequisite: CHEM 111)

CHEM 201

Quantitative Analysis (3-4)

Upon Request
5 Credits

A beginning course in Analytical Chemistry, this course includes discussions and laboratory work in gravimetric, volumetric, spectrophotometric, electrochemical and chromatographic methods of analysis. This class is taught on a self-directed learning (SDL) basis. (Prerequisite: CHEM 112)

CHEM 221

Survey of Organic and Biochemistry (3-4)

5 Credits

This is an introductory course in organic and bio-chemistry. It will not satisfy the organic chemistry requirement for a chemistry major but would serve as a good preparatory course for other organic chemistry courses or for other majors which require only one semester of organic chemistry, such as some of the allied health majors as well as some agriculture majors. The student should have some previous chemistry such as Survey of Chemistry or General Chemistry I. The course consists of three hours of classroom work and four hours of laboratory work which emphasize scientific investigations and supports lecture material. (Prerequisite: CHEM 101, CHEM 104, CHEM 111, or permission of instructor)

CHEM 271, 272, 273

Topics in Chemistry

1-3 Credits

A variable content course with areas of study that reflect current issues. Topics are identified in the course schedule and prerequisites are spelled out in the syllabus. (Prerequisite: Permission of department)

COLLEGE SKILLS

COLL 101

College Orientation (1-0)

F,S,SU
1 Credit

Degree and certificate seeking students must complete COLL 101 in their first semester at Crowder, if required by the degree or certificate they have declared. Non-degree seeking students are not required to take COLL 101. However, if students become degree or certificate seeking and the degree or certificate requires the class, they will be required to successfully complete the course. Transfer students who have successfully completed an equivalent college orientation class at another institution or have a cumulative grade point average of 2.0 on a minimum of 12 credit hours earned after high school graduation are exempt from COLL 101. The course is designed to acclimate new students to the Crowder College environment, provide them with information they will need to function as a Crowder College student, and encourage further evaluation of their character. Recommend taking course on ground. A course fee will apply.

COLL 104

Practical Communication (3-0)

F
3 Credits

Upon successful completion of this integrated communication class, students will demonstrate mastery of entry-level, workplace knowledge and skills in the areas of reading, writing, listening, and speaking. Credit earned in this course only applies toward the completion of specified certificate and degree programs. The course cannot be used as an elective in an AA or AS degree program.

COLL 105

Technical Career Development I (1-0)

F,S
1 Credit

In this interactive and need-based course, students participate in an introductory series of discussions, simulations, and experiences to develop basic "soft skills" related to vocational/technical/trades programs. The term soft skills encompasses general "people skills," such as communication, teamwork, conflict management, and professionalism. The modules address crucial knowledge and skills for a global workforce that closely align with the competencies outlined by the U.S. Secretary of Labor's Commission on Achieving Necessary Skills (SCANS).

COLL 106

Technical Career Development II (1-0)

F,S
1 Credit

This course extends the soft skills addressed in COLL 105. Course activities closely align with competencies outlined by the U.S. Secretary of Labor's Commission on Achieving Necessary Skills (SCANS). The interactive modules connect the curriculum to the

needs of a global workforce in the areas of employee positivity, reliability, professionalism, initiative, integrity, respect, and gratitude. Upon successful completion of the course, students will have earned workplace ethics and career readiness certifications and completed a professional resume for employment searches. (Prerequisite: COLL 105 or permission of instructor)

COLL 205 **F**
Career and Life Development (2-0) **2 Credits**

This course guides students through employability skills and activities that are closely aligned with competencies outlined by the U.S. Secretary of Labor's Commission on Achieving Necessary Skills (SCANS). Advanced resume, cover letter, and job seeking activities are combined with networking, online connections for job searching, and interviewing skills. Employment paperwork such as initial employment paperwork, pay, benefits, taxes, and budgeting home expenses is addressed. Participation in local job fairs, informational interviews and job shadowing is required. Soft skills associated with advancement within career/technical/vocational employment are developed. (Prerequisite: COLL 105 and COLL 106 or permission of instructor)

COMPUTER AND NETWORK SUPPORT

CNS 101 **F,S,U**
Introduction to Electronics (2-2) **3 Credits**

This course introduces the fundamental laws of scientific atomic structure, electricity and electrical safety. It builds upon those fundamentals by the study of Ohm's Law, current, voltage, resistance, power sources, and DC (direct current) measuring instruments. An introduction to complete series, parallel, and series-parallel circuits, the laws, mathematical formulas, and methods used to analyze these circuits. A study of how AC (alternating current) voltages and currents are generated, introducing the science of magnetism, and the effect of AC on electronic components such as inductors and capacitors. AC testing procedures will be emphasized. A course fee will apply.

CNS 111 **F,S**
PC Basics I (1-3) **3 Credits**

This course covers the fundamentals of computing and peripheral devices, and also provides an introduction to operating system concepts. Through hands-on labs, desktop learning tools, and extensive Internet-based research, students develop critical thinking and complex problem-solving skills. A course fee will apply.

CNS 112 **F,S**
PC Basics II (1-3) **3 Credits**

This course addresses the software side of the computing device by focusing on the operating system, basic networking concepts, and PC security. The course also provides an introduction to selected additional concepts including troubleshooting methods, "help desk" or "call center" procedures, and ethical considerations in computer technology. A course fee will apply. (Prerequisites: CNS 111 or Permission of Instructor)

CNS 113 **F,S**
Introduction to Networks (2-2) **3 Credits**

The Introduction to Networks (ITN) course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP addressing and the 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 (LAN), perform basic configurations for routers and switches, and implement IP addressing schemes. (Corequisite: CNS 111 or permission of Instructor)

CNS 114 **F,S**
CCNA Network Switching, and Routing Essentials (2-2) **3 Credits**

The Cisco Certified Network Associate (CCNA) Network Switching and Routing Essentials course will introduce the student to fundamental networking concepts and technologies. These online course materials will assist in developing the skills necessary to plan and implement small networks across a range of applications. The specific skills covered in each module are described at the start of each chapter. The course uses both online and hands-on lab

experiences to introduce routing and remote access, addressing, and network services. It will also familiarize students with Virtual Local Area Networks (VLAN) and Inter-VLAN Routing. (Prerequisite: CNS 113)

CNS 115 **F,S**
Cisco Networking I (1-3) **3 Credits**

The Cisco Certified Network Administration (CCNA) Introduction to Networks course will introduce the student to fundamental networking concepts and technologies. These online course materials will assist in developing the skills necessary to plan and implement small networks across a range of applications. The specific skills covered in each chapter are described at the start of each chapter. Online materials coupled with hands-on lab experiences will assist students in developing the skills necessary to plan and implement small networks across a range of applications. A course fee will apply.

CNS 116 **F,S**
Cisco Networking II (1-3) **3 Credits**

The Cisco Certified Network Administration (CCNA) Routing and Switching (R&S) Essentials course will introduce the architecture, components, and operations of routers and switches in a small network. In this course, you will learn how to configure a router and a switch for basic functionality. These online course materials will assist in developing the skills necessary to plan and implement small networks across a range of applications. The specific skills covered in each chapter are described at the start of each chapter. The course uses both online and hands-on lab experiences to provide an introduction to routing and remote access, addressing, and network services. It will also familiarize students with servers providing email services, web space, and Authenticated Access. A course fee will apply. (Prerequisite: CNS 115)

CNS 122 **F,S**
VMware VSphere: Install, Configure, Manage (1-3) **3 Credits**

This course will introduce the students to intensive hands-on training that focuses on installing, configuring, and managing VMware vSphere® 6.5, which includes VMware ESXi™ 6.5 and VMware vCenter Server® 6.5. This course prepares students to administer a vSphere infrastructure for an organization of any size. It is the foundation for most other VMware technologies in the software-defined data center.

CNS 126 **S**
Game Development Through Python (2-2) **3 Credits**

This course provides students coding experience in the context of computer games. Students will be trained on the foundations of game design concepts and protocols in order to better understand different types of games and the processes game designers use to create them. The course incorporates fundamental programming concepts using the Python language.

CNS 131 **F,S**
Introduction to Gaming Programming (2-2) **3 Credits**

This course will introduce the students to basic programming concepts to be applied to gaming development. This course will give the students the fundamentals of C++ from a game programming perspective. Students will start with beginning C++ and work their way through to game programming assuming no previous programming experience. Students will work with different game programs and learn new concepts in each chapter. The course will end with a final game project drawing together a comprehensive collection of the course. (Prerequisite: CNS 126 or permission of Instructor)

CNS 141 **F,S**
Programming for Gaming (2-2) **3 Credits**

This course will introduce students to the fascinating world of game programming for Windows using Visual Studio and DirectX. Students will enhance their basic understanding of the C++ language and be exposed to a solid introduction to DirectX programming. Students learn the basics of making sprite-based games. This course will provide step-by-step instruction on game creation. Students will learn how to take game ideas from concept to reality using today's standard professional game-creation tools. (Prerequisites: CNS 131 or COMP 111)

CNS 149 **F,S**
Cybersecurity I (2-2) **3 Credits**
 This course introduces the fundamentals of Network security by examining the current challenges in computer security and why security is so difficult to achieve. This course will also examine fundamental attacks including malware, viruses, Trojans and botnets. The students will be introduced to attacks that target server-side and client-side web applications. Students will explore cryptology and its uses in the security realm. This course includes instructions on understanding common network protocols and employing network design principles. Students will experience securing three popular types of network applications. IP telephony, virtualization, and cloud computing. (Prerequisites: CNS 112 & CNS 115)

CNS 217 **F,S**
Cisco Networking III (1-3) **3 Credits**
 The Cisco Certified Network Administration (CCNA) Routing & Switching (R&S) Scaling Networks course will introduce the student to the architecture, components, and operations of routers and switches in a larger and more complex network. Students will learn how to configure routers and switches for advanced functionality. These online course materials will assist in developing the skills necessary to plan and implement small networks across a range of applications. The specific skills covered in each chapter are described at the start of each chapter. Online materials coupled with hands-on lab experiences assist the student in developing skills necessary to use protocols and to maximize enterprise Local Area Network (LAN)/Wide Area Network (WAN) performance. A course fee will apply. (Prerequisite: CNS 116)

CNS 218 **F,S**
Cisco Networking IV (1-3) **3 Credits**
 The Cisco Certified Network Administration Routing & Switching Connecting Networks course will introduce the students to the Wide Area Network (WAN) technologies and network services required by converged applications in a complex network. In this course, you will learn the selection criteria of network devices and WAN technologies to meet network requirements. These online course materials will assist in developing the skills necessary to plan and implement small networks across a range of applications. A course fee will apply. (Prerequisite: CNS 217)

CNS 221
Desktop Game Development (2-2) **3 Credits**
 This course will instruct students to build successful games with the Unity game development platform. Students will use the powerful C# language, Unity's intuitive workflow tools, and a state-of-the-art rendering engine to build and deploy desktop, and console games. This course will provide students the knowledge to develop the skills to go from application coder to game developer. Each sample project illuminates specific Unity features and game development strategies. Students will have hands-on skill based training in settings to create graphically driven 2D and 3D game applications. (Prerequisites: CNS 141 and MATH 100 or higher)

CNS 222 **F,S**
VMware vSphere: Optimize and Scale (1-3) **3 Credits**
 This course will instruct the students on advanced skills for configuring and maintaining a highly available and scalable virtual infrastructure. Through a mix of lecture and hands-on labs, students will configure and optimize the VMware vSphere® 6.5 features that build a foundation for a truly scalable infrastructure, and students will discuss when and where these features have the greatest effect. This course will deepen your understanding of vSphere and how its advanced features and controls can benefit any organization.

CNS 231
Android Mobile Game Development (2-2) **3 Credits**
 This course provides a progressive, hands-on guide to developing highly interactive and complex Android games from scratch. Student will learn all the aspects of developing a game using a space shooter game as the example that will evolve with them through the course. This course instructs the students on frame-by-frame animations and resource animations. Students will create responsive menus and dialogs and explore the different options for playing sound effects and music in Android. The course will provide training on the basics of creating a particle system. (Prerequisites: CNS 141)

CNS 241
IOS Development for Gaming (2-2) **3 Credits**
 Design games for IOS, Watch OS and TVOS Apple platforms in Swift, using Apple's built-in 2D game framework: SpriteKit. Students will be instructed through a series of mini-games and challenges, to advance their knowledge game development. Students will make complete mini-games, from an action game to a puzzle game to a tower defense game. (Prerequisites: CNS 141 & MATH 104 or higher)

CNS 249 **F,S**
Cybersecurity II (2-2) **3 Credits**
 This course enhances student's security knowledge as a second course in cyber security. This course will introduce the students to attacks on wireless devices and the security procedures. Students will be instructed on different types of mobile devices and the associated security risks. Students will be introduced principles and practices of access control by examining access control terminology, the standard control models, and their best practices. Students will receive instructions on authentication and the secure management of user accounts that enforces authentication. Students will explore disaster recover, environmental controls, incident response procedures, and forensics, security policies and the different types of policies that are used to reduce risk. (Prerequisites: CNS 112 and CNS 115)

CNS 250 **F**
Linux Network Administration (1-3) **3 Credits**
 This course covers the installation, configuration, and maintenance of a Linux-based operating system in a networked, multi-user environment. Primary focus will be on user/group management, file system utilization, system security, and utilization of various popular Linux server functionalities. A course fee will apply.

CNS 251 **F,S**
CCNA Enterprise Networking, Security, and Automation (1-3) **3 Credits**
 The Enterprise Networking, Security, and Automation (ENSA), will take the skills and knowledge that students learned in ITN and SWRE and apply them to wide area networks (WANs). WANs are large, complex networks that require advanced understanding of network operation and security. ENSA also introduces students to two game-changing areas of networking: virtualization and automation. By the end of this course students will be able to configure, troubleshoot, and secure enterprise network devices. The student will be versed in application programming interfaces (APIs) and configuration management tools that make network automation possible. When students have completed ENSA, they will have gained the practical experience needed to prepare for the certification exam. Students will also have the skills required for associate-level roles in the Information and Communication Technologies (ICT) industry. (Prerequisite: CNS 114)

CNS 259 **S**
Intro to PowerShell (2-2) **3 Credits**
 Command line has always been the way to manage a Windows computer without interacting with the Graphical User Interface. PowerShell is the modern way of managing Windows (now with limited management of MacOS and Linux) and lives up to its name by introducing hundreds of commandlets and through the ease of use to manage remote systems. This course will provide instruction on being able to use commands and create scripts that can help automate and speed up processes within IT. (Prerequisite: CNS 112)

CNS 271, 272, 273
Topics in Computer and Network Support Technology
(0-8 to 3-0) **1-3 Credits**
 This is a variable content course with areas of study that reflect current needs of individual students in the area of Computer and Support Technology. Topics are identified in the course description. A course fee will apply. (Prerequisite: Permission of instructor)

CNS 275 **F,S**
Advanced Microsoft Server (1-3) **3 Credits**
 This course provides advanced instruction in the design, setup, equipping, and maintenance of a network server center. Focus will be on the selection of the various types of network server computers, peripheral devices, and software necessary to provide the services required by both network administrators and users. A course fee will

apply. (Prerequisites: Permission of Instructor)

CNS 285 **F,S**
Computer Network Support Internship (0-10) **4 Credits**
This course provides direct hands-on experience in a structured environment under the direct supervision of experienced business/industry professionals employed by a hosting organization. The course requires that 160 clock-hours be spent at the hosting location (s) during the term of study. (Prerequisites: Permission of Instructor)

COMPUTER PROGRAMMING

Students are expected to schedule additional time outside of class in the computer lab to complete assignments.

COMP 111 **F,S**
Introduction to Computer Science (3-2) **4 Credits**
Instruction is given on the techniques of structured and object-oriented programming. The class assumes no prior programming experience. It is required for Computer Science and Information Science majors and is recommended for students in any academic or career vocational major who need to have skills on how a computer can be programmed as a problem solving tool. The course topics will include: elementary syntax, functions, classes, objects, control structures, user defined data types, arrays and data structures. (Prerequisite: MATH 135)

COMP 271, 272, 273
Topics in Computer Science **1-3 Credits**
A variable content course with areas of study that reflect current issues. Topics are identified in the course schedule and prerequisites are spelled out in the syllabus. (Prerequisite: Permission of department)

CONSTRUCTION (Energy Efficient Building Technology)

CONS 105 **F**
Introduction to Construction Technology (2-2) **3 Credits**
This course is built around NCCER's (National Center for Construction Education and Research) introductory "Core" material and is a pre-requisite for obtaining NCCER registration. As such, it is designed to provide a broad range of introductory information and hands-on practice to beginning students in construction technology. Topics covered at the introductory level include safety, shop math, hand tools, power tools, blueprints, rigging, basic communication, and basic employment skills. A course fee will apply.

CONS 108 **F,S**
Energy Conservation Techniques (2-2) **3 Credits**
Students will learn sensible improvements for new and existing buildings. These improvements are designed to increase the energy efficiency, livability and sustainability of any structure. Students will also be given an understanding of the economics of energy sources such as solar, wind, hydro and nuclear power.

CONS 112 **S**
Carpentry Fundamentals (2-2) **3 Credits**
This course is based on the NCCER (National Center for Construction Education and Research) Level 1 Carpentry Fundamentals curriculum. It is designed to provide a broad range of information and hands-on practice to students in the fundamentals of construction. Topics studied include trade orientation, building materials, fasteners/adhesives, hand and power tools, reading plans/elevations, introduction to concrete, reinforcing materials, floor systems, windows and exterior doors, wall/ceiling framing, roof framing, and basic stair layout. A course fee will apply. (Prerequisite: CONS 105 or Permission of Instructor)

CONS 116 **S**
Framing and Finishing (2-2) **3 Credits**
This course is based on the NCCER (National Center for Construction Education and Research) Level 2 Carpentry Fundamentals: Framing and Finishing and is designed to provide a broad range of information and hands-on practice to students in the fundamentals of construction. Topics include roofing applications, thermal/moisture protection, exterior finishing/siding, and cold-formed

steel framing, drywall installation/finishing, doors/door hardware, suspended ceilings, trim for windows, doors, floors and ceilings, and cabinet fabrication/ installation. A course fee will apply. (Prerequisite: CONS 105 or Permission of Instructor)

CONS 121 **S**
Masonry (2-2) **3 Credits**
This course is based on the NCCER's (National Center for Construction Education and Research) Level 1 Masonry curriculum. Topics covered in the course include introduction to masonry and masonry units, masonry tools/equipment, measurements, basic installation, drawings/specifications, and mortar. A course fee will apply.

CONS 131 **F**
Plumbing (2-2) **3 Credits**
This course is based on NCCER's (National Center for Construction Education and Research) Level 1 Plumbing curriculum. Topics covered in this portion include an introduction to the plumbing profession, safety practices, plumbing tools/math/drawings, and working with plastic pipe and fittings. Also included are copper/cast-iron/carbon steel/stainless piping/fittings, fixtures/ faucets, DWV (Drain, Waste, and Venti-lation) systems, and water distribution systems. A course fee will apply.

CONS 141 **F**
Electrical (2-2) **3 Credits**
This course is based on the NCCER's (National Center for Construction Education and Research) Level 1 Electrical curriculum. Topics covered include an introduction to the electrical trade, safety, basic circuits/theory, introduction to the NEC (National Electrical Code), device boxes and conduit bending/installation, raceways/fittings, conduc-tors/cables, electrical drawings, residential and commercial services, test equipment and materials and labor estimating. A course fee will apply.

CONS 151
Introduction to National Electrical Code (3-0) **3 Credits**
This course will introduce the students to the National Electric Code (NEC). The students will learn the minimum requirements for safe electrical installations in a single, standardized source. Students will be instructed on the use and layout of the NEC. This course explores Articles of the NEC including definitions and basic initial electrical requirements.

CONS 155 **S**
Basic HVAC (2-2) **3 Credits**
This is an introductory course on basic Heating, Ventilation, and Air Conditioning (HVAC) concepts utilizing curriculum from the National Center for Construction Education and Research (NCCER-HVAC Level 1). Students will learn by coupling traditional classroom activities with practical hands-on laboratory experiences. Topics covered include basic electrical principles, fundamental HVAC concepts, working with various types of tubing/piping, and air-handling systems. A course fee will apply. (Prerequisite: CONS 105 or AMT 111 or Permission of Instructor)

CONS 174 **S**
Carpentry Forms (2-2) **3 Credits**
This course is based on the NCCER's (National Center for Construction Education and Research) Level 3 Carpentry Fundamentals and is designed to provide a broad range of information and hands-on practice to students in construction technology relative to concrete forms and placement. Topics covered include rigging practices/ equipment, concrete properties/ reinforcement, handling/placing concrete, trenching, excavating, foundations and slab-on-grade, vertical formwork, horizontal formwork, and tilt-up wall panels. A course fee will apply. (Prerequisite: CONS 105 or Permission of Instructor)

CONS 232 **F**
Site Layout (2-2) **3 Credits**
This course is based on the NCCER's (National Center for Construction Education and Research) Level 1 Site Layout materials and is designed to provide extended information beyond the core classes and hands-on experience to students in the fundamentals of site layout. Topics covered include distance measurement and leveling, measurement conversion, proper tool/equipment handling,

surveying math/operations, basic data collection/computer entry skills, concrete properties, and means/methods. A course fee will apply.

CONS 245 **S**
Project Management (2-2) **3 Credits**

This course is based on the NCCER's (National Center for Construction Education and Research) project management materials to expand front-line supervision concepts by incorporating topics relating to the broader scope of project management. Topics covered include introduction to project management, safety, interpersonal skills, issues/resolutions, and construction documents/planning, cost estimation/ control, scheduling, resource/quality control, and continuous improvement. A course fee will apply.

CONS 251 **S**
National Electric Code Wiring Methods (3-0) **3 Credits**

This course continues to introduction of the National Electric Code (NEC). The students will learn the requirements for wiring methods and materials. Students will be instructed on the use and layout of the NEC wiring methods. This course will explore the articles of the NEC including wiring methods, cables, conduit and wireways.

CONS 290 **F,S**
Construction Internship (0-8) **3 Credits**

Provides direct hands-on experience in a structured environment under the direct supervision of experienced tradesmen employed by the hosting organization. Students are required to provide regular reports of work tasks attempted/completed as well as the overall time spent at the host's work location. Hosts agree to provide a safe, supervised work environment with students addressing tasks directly related to energy efficient building and the specific option being pursued by the student: General Construction, Construction Management, or Alternative Technologies. At the end of the internship, hosts will complete and submit a written evaluation of the student's performance. This course requires that 160 clock-hours be spent at the hosting location(s) during the term of study. (Prerequisite: Sophomore standing (> 28 Hours) or Permission of Instructor)

CRIMINAL JUSTICE

CJ 101 **F,S**
Introduction to the Criminal Justice System (3-0) **3 Credits**

This course is an introduction to the history, nature, structure, and function of the criminal justice system in the United States. An examination of the various aspects of the administration of justice systems, including law enforcement, courts and correctional agencies, including probation and parole, will be made. A course fee will apply.

CJ 102 **F,S**
Crime Scene Processing (2-2) **3 Credits**

This Course covers the actions of the initial responding officer at the crime scene. Students will learn the nature of physical evidence, processing methodology, basics in crime scene assessment, photography, sketching, mapping, and proper documentation techniques. Students will be required to demonstrate they can properly collect evidentiary material that can withstand the scrutiny of the legal system. This is the practical portion of criminal investigation that law enforcement officers are required to demonstrate on a daily basis. A course fee will apply.

CJ 103 **S**
Telecommunications (2-2) **3 Credits**

This course guides students through employability skills and activities that are covered in levels of Emergency Communications. Course includes lessons and activities that closely align with the competencies outlined by the National Academies of Emergency Dispatch (NAED). The Course will cover the roles and responsibilities of the Emergency Telecommunicator, Technologies, Interpersonal Communications, Essentials, Caller management, call Classifications (Law Enforcement, Fire, and Medical), Catastrophic Events, and Radio Broadcast procedures, Legal Aspects, Quality Improvement and Stress management. A commercially available trainer will be used to give the students acquire hands-on training need for the Emergency Dispatcher. A course fee will apply.

CJ 190 **F,S**
Patrol Operations (2-2) **3 Credits**

This course is designed to integrate the academic and practical aspects of the basic patrol function for a law enforcement officer. The course examines patrol officer's duties, functions, and responsibilities as well as providing techniques to effectively respond to varied calls-for-service. The course includes lecture and practical applications in the areas of officer safety, traffic stops, contact and arrest, traffic enforcement, natural disasters, and other duties as they relate to the basic patrol function. A course fee will apply.

CJ 200 **F,S**
Criminal Investigations (3-0) **3 Credits**

This course will cover the concept of criminal investigative work from the early days up to present practices. Areas of emphasis will be the history of criminal investigation, identification, documentation and collection of physical evidence, statutory guidelines, the criminal investigator as a witness, and the different methods of investigation for each type of felony crime. A course fee will apply.

CJ 210 **F,S**
Criminal Procedures (3-0) **3 Credits**

This course will examine the U.S. Constitution, 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. A course fee will apply.

CJ 230 **F,S,SU**
Criminal Justice Internship (3-0) **3 Credits**

Criminal Justice Internship is a planned program of participant observation in a selected criminal justice agency, private corporation or related field. Students will work with the internship instructor to select an appropriate organization for placement based on the students anticipated career goals and interests. Students will be at their placement organization from 8 to 10 hours per week. Students are required to turn in weekly assignments utilizing the online course companion. (Prerequisite: CJ 101, CJ 280 & Permission of Instructor)

CJ 250 **F,S**
Criminal Law (3-0) **3 Credits**

Criminal Law is an introduction to the purposes and functions of United States Criminal Law. The course highlights the rights and duties of officers and citizens in relation to local, state and federal laws. Students will examine the development, applications and enforcement of the various laws throughout Missouri and the United States. A course fee will apply.

CJ 265 **F,S**
Ethics in Criminal Justice (3-0) **3 Credits**

This Criminal Justice course identifies and examines the ethical considerations that face the criminal justice practitioner. Areas of emphasis will include determining moral behavior, developing moral and ethical behavior, ethics and law enforcement, ethics and the courts, ethics and corrections and the ethics of punishment. Other areas of emphasis will be policy and management issues, professionalism, pride and ethics for practitioners. A course fee will apply.

CJ 270 **F,S**
Drug Investigation (3-0) **3 Credits**

Drug Investigation is an introduction to the study of the use, abuse, and history of legal and illegal drugs in the United States and abroad and how it has affected communities. Principles of Statutory and Constitutional Law as they pertain to the investigation of drug related crime, and controversial issues concerning criminalization, legalization and taxation will be discussed. Principles of treatment and programs for first-time up to career offenders will be discussed and what the cost-benefit is for both the offender and the community in which they live. Methods of identification, detection, investigation and presentation of legally admissible evidence will be addressed. This course is recommended for law enforcement/ criminal justice majors. A course fee will apply.

CJ 280 **F,S**
Report Writing (3-0) **3 Credits**
 This course will identify the areas of concern in regard to proper documentation of police related activities. It will focus on report writing skills, proper structuring of interviews and chronological documentation of events. Course will incorporate proper sentence structure, the use of correct terminology, and accuracy in written reports. A course fee will apply.

CJ 285 **F**
Family Violence (3-0) **3 Credits**
 This course develops the student's ability to think critically about the dynamics of violence between victims, offenders and other household members in shared relationships. This course focuses on response, recognition, and assessment of violence including signs and symptoms displayed by the parties involved. The overall goals of the course are to deepen the students' skills in the assessment of family violence and in responding legally and ethically where violence has occurred.

CJ 290 **F,S**
Police Supervision and Management (3-0) **3 Credits**
 This course will focus on police managerial systems; theory and styles as well as operation, leadership skills, and suggestions to create a better understanding of what is required to have an efficient, effective law enforcement agency. Organizational policies and procedures will be presented. Various law enforcement agencies will be examined, analyzed and comparisons made, and contrasts will be evaluated. A course fee will apply.

DIESEL TECHNOLOGY

DIES 124
Preventive Maintenance (2-4) **4 Credits**
 Preventive Maintenance is the key to keeping today's high tech diesel equipment in the field and on the road. This course covers the procedures for a major inspection including the selection of filters, evaluation of lubricants, oil sampling, selection of fuels, inspection of tread wear patterns, and adjustment of the various components. A course fee will apply.

DIES 134
Diesel Hydraulics (2-3) **4 Credits**
 This course studies hydraulics commonly used on industrial and agricultural machinery. Topics include basic principles, design, and construction of hydraulic pumps and motors. Cylinders, valves and other control devices are discussed. Troubleshooting and testing procedures complete the course. A course fee will apply.

DIES 144
Diesel Engines I (2-4) **4 Credits**
 This course is designed to acquaint the student with diesel engines and the processes that are needed to properly overhaul an engine. Topics include disassembly, parts identification, measurement of parts, parts reusability, rebuilding of various sub-assemblies, and proper re-assembly of the engine. A course fee will apply.

DIES 164
Diesel Brake Systems (2-4) **4 Credits**
 This course acquaints the student with the various brake and suspension systems found on today's heavy-duty trucks and equipment. Hydraulic and air brake systems are discussed along with componentry of each system. A course fee will apply.

DIES 184
Electrical/Electronics I (2-4) **4 Credits**
 Theory, operation and testing of various electrical systems found on industrial and trucking equipment will be covered. Topics covered include: basic electricity, batteries, circuit types, starting motors, generators, alternators and regulators, lighting and auxiliary circuits. A course fee will apply.

DIES 204
Diesel Powertrains (2-4) **4 Credits**
 To allow the engine to give its best performance, the powertrain must be able to direct the power where it is needed. This course covers the basic powertrains as they are used in industrial applications. Components such as clutches, mechanical transmissions, hydraulic

assist transmissions, differentials, final drives and other drives are studied. Adjustments such as end play, backlash and preload are examined as well as the different fluids used for lubrication and fluid drive. A course fee will apply.

DIES 224
Diesel Steering and Suspension (2-4) **4 Credits**
 This course will cover the basic theories and applications of steering and suspension systems used on today's light and heavy duty trucks. Steering component adjustment and replacement will be discussed along with the various types of suspension systems found on heavy duty trucks. The interaction of these components and how they affect truck alignment will complete the course. A course fee will apply.

DIES 234
Air Conditioning (2-4) **4 Credits**
 This study of the theory and operation of air conditioning systems as they are used with automotive equipment examines basic system components, controls and air movement devices. Troubleshooting, testing and basic tool use such as pressure gauge sets and refrigerant recovery are also covered. A course fee will apply.

DIES 244 **F,S,SU**
Diesel Internship (0-10) **4 Credits**
 The student will receive on-the-job experience in an approved training site. This will allow the student to practice and utilize the skills and knowledge learned in the previous semesters. This work experience will be supervised by the instructor one period per week. (Prerequisite: Permission of Instructor)

DIES 284
Diesel Electrical/Electronics II (2-4) **4 Credits**
 Theory, operation and testing of various electrical systems found on industrial and trucking equipment will be covered. Topics covered include the following: truck and trailer lighting systems, instrumentation and warning systems, electrical accessories, ignition systems, and computer control systems. A course fee will apply.

DIES 294
Diesel Engines II (2-4) **4 Credits**
 A follow-up course to Diesel Engines I, this course has the student studying operational engines with various problems installed by the instructor. Students disassemble the engine, check for worn or damaged parts, correct these problems and bring the engine back to operational condition. Students are also required to explain the reasoning behind the replacement of parts. A course fee will apply. (Prerequisite: DIES 144 or Permission of the Instructor)

DRAFTING AND DESIGN TECHNOLOGY

DRFT 101 **F,S**
Introduction to Engineering Drawing and Print Reading (2-2) **3 Credits**
 This course provides a foundation for all engineering and technical design courses. This study includes basics of freehand sketching and CAD Drafting, and print reading. This study also includes all principles using section, auxiliary and pictorial views to better describe the product. A course fee will apply.

DRFT 115 **F,S**
Basic Computer Aided Drafting (2-2) **3 Credits**
 This course is an introduction to Computer Aided Drafting. The primary focus is on entry-level AutoCAD Command usage, drawing commands, viewing commands, and modify commands. Topics include drawing layouts, 2-dimensional drawing, editing and viewing commands, drafting practices and standards, file management practices and practical uses of CAD drawings. A course fee will apply.

DRFT 141 **F**
Assembly Drawings (1-3) **3 Credits**
 This course builds a foundation for all engineering and technical design courses. This study builds knowledge and understanding of assembly drawings, the procedures for producing any of the assembly drawings. A course fee will apply. (Prerequisite: DRFT 101)

DRFT 153 **S**
Construction Graphics (2-2) **3 Credits**
 This course provides a foundation for HVAC, Electrical, and Plumbing design. Students will use REVIT software for 2D and 3D designs to develop construction drawings, site plans, elevation drawings, and structural designs. Coursework will be related to residential and commercial construction and includes basic design techniques used for MEP systems. (Prerequisite: DRFT 101)

DRFT 197, 198, 199, 297, 298, 299
Topics in Drafting and Design Technology (0-8 to 3-0) **1-3 Credits**
 This is a variable content course with areas of study that reflect current needs of individual students in the area of Drafting and Design Technology. Topics are identified in the course description. A course fee may apply. (Prerequisite: Permission of instructor)

DRFT 215 **S**
Advanced Computer Aided Drafting (Inventor)(2-2) **3 Credits**
 This course is designed to introduce the student to a variety of new activities using Computer Aided Drafting which include: (1) 3D-Drawing (2) 3D-Modeling, (3) Review of Auto CAD's Release 12, (4) Review of new types of CAD software, (5) Creating custom screen menus, (6) A look at Auto LISP, (7) Translating drawings via DXF and IGES. A course fee will apply. (Prerequisite: DRFT 205)

ECONOMICS

ECON 201 **F,S,SU**
Principles of Macroeconomics (3-0) (Macro) **3 Credits**
 This basic course in aggregate economics emphasizes national income theory, fiscal policy, money and monetary policy, business cycles and economic growth. Students successfully completing this course partially fulfill Social and Behavioral Science general education requirements. (Prerequisite: Reading at least at college level) (MATH 100 or higher is recommended)

ECON 202 **F,S,SU**
Principles of Microeconomics (3-0) (Micro) **3 Credits**
 A continuation of Economics 201, this course emphasizes price, theory, competition models, wage, rent, and profit determination, international trade and balance of payments theory, and special international problems. Students successfully completing this course partially fulfill Social and Behavioral Science general education requirements. (Prerequisite: Reading at least at college level) (MATH 100 or higher is recommended) (Note: ECON 201 is not a prerequisite for ECON 202)

EDUCATION

NOTE: The state of Missouri may require all teacher education students to complete additional specific general education courses. Students are advised to work closely with their education advisor to select courses to meet current state certification requirements.

Students must register with FCSR and have a clearance letter before completing any observation in schools.

EDUC 125 **F,S,SU**
Introduction to Education (3-0) **3 Credits**
 This course familiarizes students with the personal and professional demands of teaching, explores the field of teaching, introduces teacher education programs and certifications, and examines the historical, philosophical, political, and legal foundations of the American public education system. In introducing students to the education field, the course depicts teaching in its realistic intricacies, describes the considerations of professional teaching, and examines traits of effective schools and educators. In introducing students to the foundations of education, the design and organization of school curricula at the local, state, and federal levels, past and present ethical and legal school issues, school/community relations, and critical cultural and social issues in education. This course offers a 5-hour observation in a classroom. A cleared background check is required before any observation takes places.

EDUC 205 **F,S**
Music for Elementary Teachers (3-0) **3 Credits**
 Students study and use the methods, materials and skills involved in the integration of music into the elementary classroom curriculum. This course is DESE approved for Elementary Education majors.

(Prerequisite: Reading at least at college level)

EDUC 206 **F,S, SU**
Literature for Children (3-0) **3 Credits**
 This study of literature for elementary grades is recommended for, but not restricted to, Elementary Education majors. Students evaluate literature as a developmental tool. This course does not fulfill the literature portion of the general education Humanities requirement. This course is DESE approved for Elementary Education majors. (Prerequisite: ENGL 101 or higher and reading at least at college level)

EDUC 212 **F,S, SU**
Educational Technology (3-0) **3 Credits**
 In this course students will learn how to integrate instructional technology into the P-12 classrooms. Students will study a variety of software programs, presentation technology, and telecommunication tools. The focus will also be on social, ethical, legal, and human issues surrounding the use of technology. (Prerequisite: ENGL 101)

EDUC 231 **F,S,SU**
Educational Psychology (3-0) **3 Credits**
 This course is designed to help students relate theories and principles of educational psychology to teaching, learning, and assessment. This course focuses on the diversity of learners and learning processes, as well as teacher characteristics, classroom strategies, and data analysis in P-12 classrooms. Appropriate strategies for increasing motivation, multi-dimensional development, and academic achievement for all learners are introduced. (Prerequisite: PSYC 101)

EDUC 240 **F,S,SU**
Education of Exceptional Learners (3-0) **3 Credits**
 This survey course is an introduction to exceptional learners and their education in grades P-12. Students will attain knowledge, skills, and dispositions that will enable them to work effectively with exceptional learners in general education or special education. The content of this course includes the history of Special Education, legal and ethical issues, state and federal guidelines, characteristics of the exceptional student, methods and techniques for instruction, school/community resources, and assistive/adaptive technology. (Prerequisite: PSYC 101)

EDUC 251 **F,S,SU**
Teaching Profession with Field Experience (3-0) **3 Credits**
 This course includes an introductory, minimum thirty (30) hours of school field experience in accredited P-12 classrooms that provide opportunities to observe and contribute to teaching and learning. This course allows preservice teachers to connect firsthand school experience with an emerging professional knowledge base. The course develops professional knowledge of diverse educational settings through observation, instruction, experience, and reflection. This course is designed to assist students in determining if a career in teaching is an appropriate goal. Requirements for teacher preparation and certification are reviewed. (Prerequisite: ENGL 101 & EDUC 125)

The following classes have not been approved by DESE and are not required for degrees in Elementary or Secondary Education. Students should contact representatives at their transfer college to determine how the courses will transfer. The State Board of Education has not approved these classes as core classes for Teacher Education majors.

EDUC 100, 101, 200, 201 **Upon Request**
Topics in Teacher Education (1-3) **1-3 Credits**
 These courses involve the study of selected teacher education topics that require greater emphasis, different methodology, or are not covered in other classes.

EMERGENCY MEDICAL SERVICES

AEMT 125 **S** **Introduction to Advanced EMS Practice (2-0) 2 Credits**

This course is a comprehensive program consisting of classroom (didactic) component only. This course adheres to the 2009 National EMS Education Standards which are based on the National EMS Core Content and National EMS Scope of Practice and the Missouri Bureau of EMS regulations. (Prerequisite: AHA BLS healthcare provider Level CPR, current EMT certification and/or licensure and reading assessment)

AEMT 130 **S** **Human Anatomy, Physiology and Pathophysiology for the Advanced Emergency Medical Technician (AEMT) (2-0) 2 Credits**

This course is a comprehensive program consisting of classroom (didactic) components. This course adheres to the 2009 National EMS Education Standards which are based on the National EMS Core Content and National EMS Scope of Practice and the Missouri Bureau of EMS regulations. (Prerequisite: AEMT 125)

AEMT 135 **S** **Pharmacology, Vascular Access and Medication Administration for the AEMT (2-1) 3 Credits**

This course is a comprehensive program consisting of both classroom (didactic) and skills lab (psychomotor) components. This course adheres to the 2009 National EMS Education Standards which are based on the National EMS Core Content and National EMS Scope of Practice and the Missouri Bureau of EMS regulations. (Prerequisite: AEMT 130)

AEMT 140 **S** **AEMT Medical Emergencies (3-1) 4 Credits**

This course is a comprehensive program consisting of both classroom (didactic) and skills lab (psychomotor) components. This course adheres to the 2009 National EMS Education Standards which are based on the National EMS Core Content and National EMS Scope of Practice and the Missouri Bureau of EMS regulations. (Prerequisite: AEMT 135)

AEMT 145 **S** **AEMT Trauma Emergencies and Patients with Special Challenges (3-1) 4 Credits**

This course is a comprehensive program consisting of both classroom (didactic) and skills lab (psychomotor) components. This course adheres to the 2009 National EMS Education Standards which are based on the National EMS Core Content and National EMS Scope of Practice and the Missouri Bureau of EMS regulations. (Prerequisite: AEMT 140)

AEMT 150 **S** **Advanced Clinical I (4-0) 4 Credits**

This course is a comprehensive program consisting of both classroom (didactic) and clinical components. This course adheres to the 2009 National EMS Education Standards which are based on the National EMS Core Content and National EMS Scope of Practice and the Missouri Bureau of EMS regulations. This course builds on the respective students' fundamental knowledge of patient care in the clinical and field setting, including patients of all ages with a variety of presentations.

This course also provides an overview of the principles of safe ground ambulance operations, incident management, multiple casualty incidents, air medical responses, vehicle extrication, hazardous materials and terrorism and disaster response. (Prerequisite: AEMT 145 or EMTP 230)

EMR 101 **S** **Emergency Medical Responder (3-0) 3 Credits**

The emergency medical responder (EMR) course is designed to teach emergency medical responder lifesaving skills as stated in the course competencies. Upon successful completion of the course and subsequent testing with the National Registry of Emergency Medical Technicians (NREMT), the student will gain certification to practice as an EMR. (Prerequisite: Must be 16 years of age and hold an American Heart Association CPR Healthcare Provider Level card)

EMT 101 **F,S** **Emergency Medical Technician (9-0) 9 Credits**

The Emergency Medical Technician Program provides the EMT student with a supervised clinical learning experience that goes beyond the initial EMT requirements for the State of Missouri Bureau of EMS established requirements. Students will work with an assigned preceptor for 76 hours of clinical experience to develop an understanding of the role and responsibilities of the EMT/EMT-Basic. Curriculum includes human anatomy and physiology; CPR; bleeding control; immobilization measures; medical emergencies including cardiac, endocrine, cardiovascular, renal, GI, altered mental status and pulmonary emergencies; trauma emergencies; special populations and EMS operations. This course is approved by the Missouri Bureau of Emergency Medical Services and will allow successful graduates to sit for the NREMT EMT-basic exams. A course fee will apply. (Prerequisites: must be at college-level reading, 18 years of age or turning 18 before the end of the course, immunization history (Hep B, Flu, TB), background check at the cost of the student PRIOR to acceptance in the program and physical examination by approved medical provider) (Corequisite: AHA Healthcare Provider Level CPR, Approval by Program Director to enroll)

EMTP 225 **F,S** **Emergency Medical Technician-Paramedic (7-2) 9 Credits**

This is the first of five courses which follow the United States Department of Transportation Paramedic National Standard Curriculum. In this course, the students will be exposed to the roles and responsibilities of a paramedic within an EMS system, apply the basic concepts of development pathophysiology, medical ethics, legal aspects, pharmacology, learn proper documentation/communication methods and apply critical thinking skills to skill lab scenarios. A course fee will apply. (Prerequisites: Current EMT national certification and/or state licensure AHA BLS Healthcare Provider level card required. Acceptance to Paramedic Program required to enroll)

EMTP 230 **F,S** **Emergency Medical Technician-Paramedic (7-2) 9 Credits**

This is the second of five courses which follow the United States Department of Transportation (DOT) Paramedic National Standard Curriculum. In this course the students will to medical patient assessment including airway management strategies, respiratory emergencies and capnography; cardiovascular emergencies, ECG interpretation with treatment strategies and pharmacology integration. A course fee will apply. (Prerequisites: EMTP 225, current EMT license/certification; BLS HCP level CPR)

EMTP 235 **F,S** **Emergency Medical Technician – Paramedic (7-2) 9 Credits**

This is the third of five courses which follow the United States Department of Transportation Paramedic National Standard Curriculum. In this course, the students will be exposed to neurologic, abdominal, GI/GU, endocrine, immunologic emergencies, and pharmacology integration. A course fee will apply. (Prerequisites: EMTP 230 & AHA BLS Healthcare Provider level card required)

EMTP 240 **F,S** **Emergency Medical Technician – Paramedic (4-5) 9 Credits**

This is the fourth of five courses which follow the United States Department of Transportation (DOT) Paramedic National Standard Curriculum. In this course, students will learn to recognize, assess and manage patients with acute injuries, obstetrics and neonatal emergencies. This is the first of a two-term clinical/lab sequence. This course consists of Emergency Medical Service (EMS) on-site skill instruction, cadaver lab and competency verification that takes place at clinical sites and in the EMS Skills Lab. A course fee will apply. (Prerequisites: EMTP 235, Current EMT national certification and/or state licensure, AHA BLS Healthcare Provider level card required).

EMTP 250 **S,SU** **Emergency Medical Technician – Paramedic Capstone (0-6) 6 Credits**

This is the final course which follows the United States Department of Transportation (DOT) Paramedic National Standard Curriculum. This is the second of a two-term clinical/lab sequence. In addition to learning EMS Operations, this course consists of Emergency Medical

Service (EMS) skill instruction, competency verification that takes place at intrahospital and out of hospital (OOH) clinical sites that provide students with opportunities to reinforce knowledge, skill sets and abilities acquired in the EMS Skills Lab and a capstone presentation. (Prerequisites: EMT 240, Current EMT national certification and/or state licensure, AHA BLS Healthcare Provider level CPR certification)

EMTP 275 **F,S**
RN to Paramedic Bridge (6-3) **9 Credits**

This course is designed to prepare registered nurses, in good standing, for the National Registry Paramedic (NRP) psychomotor and cognitive examinations. In this course the student will be exposed to the areas of healthcare and pre-hospital environment that differs from the RN scope of practice. The student will be exposed to the paramedic scope of practice, legal/ethical issues of emergency medical services, pre-hospital treatment and care of acutely ill and injured persons, EMS operations, and the clinical skills performed by a paramedic that are outside of a standard RN scope of practice. (Prerequisites: Current RN license with two or more years of Emergency/Critical Care, ICE, CVICU, CCU or equivalent, one year of emergency and one year of critical care experience OR one year of RN experience, ER/Critical Care with a current EMT license and one year of pre-hospital experience OR one year of RN experience with current CFRN, CCRN, CEN or CTRN certification and is actively working in emergency/critical care, must prove documented RN work experience in emergency/critical care of at least 1000 hours in the last 2 years, Current American Heart Association BLS and ACLS provider certifications, GPA of 2.5 on a 4.0 scale in all college coursework prior to entering program, EMT license, pre-hospital, critical care, or transport experience is preferred, and PALS, PHTLS, TNCC and ENPC certification(s) are preferred)

EMTP 290 **F**
Community Paramedic (7-2) **9 Credits**

This course follows the standards established by the Missouri Bureau of Emergency Medical Services (EMS). In this course, students will be introduced to the role of the community paramedic emphasizing home health, chronic disease management and targeted prevention strategies designed to avert patients from the health care system. (Prerequisites: Current paramedic national certification and/or state licensure and a minimum of two years of experience on a paramedic ambulance)

ENGLISH AND LITERATURE

ENGL 99 **F,S**
Composition Support Lab (3-0) **3 Credits**

This course will focus on assisting students who need extra support in order to successfully complete English 101. This class will work concurrently with English 101 based on the appropriate placement scores and allow students to complete the gateway course with additional instruction in grammar, usage, mechanics, and style. (This is a credit or no credit course)

ENGL 100
Mechanics of Composition (3-0) **3 Credits**

This course focuses on an in-depth study of traditional grammar and mechanics of composition, including an intensive analysis of subjects, verbs, sentence structure, and punctuation. The course may be required of students depending on scores on placement criteria, is recommended for students returning to school from a prolonged absence, and is beneficial for elementary or secondary education majors although it is not an approved education elective. The course does not fulfill communications requirements for the AA degree and may be taken concurrently with ENGL 101 if the student has the appropriate placement score for ENGL 101.

ENGL 101 **F,S,SU**
English Composition (3-0) **3 Credits**

The primary aim of this freshman writing course is to give students instruction and practice in writing mechanically correct, well organized, and well-developed expository themes on topics of importance and significance. This course fulfills a portion of communications general education requirements. (Prerequisites: Successful completion of COMM 92, ENGL 100, or an appropriate score on the placement exam; keyboarding skills are necessary)

ENGL 102 **F,S,SU**
Advanced English Composition (3-0) **3 Credits**

This writing course continues the study of clearly effective written expository prose for those who have successfully completed English 101. In addition, students advance to study more complex methods of thesis development, particularly argument. Research and documentation procedures are integral subject matter. This course fulfills a portion of communications general education requirements. (Prerequisite: ENGL 101)

ENGL 104 **S**
Honors English Composition

This honors English course taken in conjunction with a traditional English 102 course continues the study of clearly effective written expository essays for those who have successfully completed English 101 and are participants in the Crowder College Honors Program. In addition, students advance to study more complex methods of thesis development, particularly argument. Research and documentation procedures are integral subject matter. This course fulfills a portion of communications general education requirements and requires students to complete an additional research component. This course is taken within ENGL 102 and is pass/fail; there are no additional credits awarded. (Prerequisite: Limited to Honors Program Participants and completion of ENGL 101)

ENGL 109 **F,S,SU**
Introduction to Literature I (3-0) **3 Credits**

Introduction to Literature emphasizes enjoyment, appreciation, and understanding of various types of literature: poetry, drama, and fiction. This course partially fulfills general education humanities requirements. (Prerequisite: College level reading score on appropriate placement exam)

ENGL 113, 114, 213, 214 **SDL/Upon Request**
Topics in Language and Literature **1-4 Credits**

An opportunity to participate in a variety of topics and/or projects pertaining to language and literature offers specialized, in-depth study. Students design the course in conference with instructor and division chair.

ENGL 203 **S**
Technical Report Writing (3-0) **3 Credits**

Students are introduced to the practical aspects of preparing business and industrial reports in this course. Techniques of collecting and presenting data are emphasized through quality communication: formal and informal reports, demonstration, presentation and discussion. This course fulfills a portion of A.A.S. Communications general education requirements. (Prerequisite: ENGL 101 or permission of instructor) (Keyboarding skills are necessary)

ENGL 222 **F**
World Literature I (3-0) **3 Credits**

Selected reading in Greek and Roman literature emphasizes epics, dramas, and mythology as well as the Divine Comedy, Don Quixote, and others, emphasizing literature not from British or American authors. (Prerequisite: College level reading score on appropriate placement exam or completion of the COMM 90 sequence)

ENGL 225 **S**
World Literature II (3-0) **3 Credits**

A survey of landmarks of world literature from the eighteenth century to the twentieth century, emphasizing literature not from British or American authors. (Prerequisite: College level reading score on appropriate placement exam or completion of the COMM 90 sequence)

ENGL 230
Survey of American Literature I (3-0) **3 Credits**

Selected readings in American literature from its native roots through the end of the Civil War, with emphasis on the oral traditions of native peoples, the poetry and essays of the Puritans and early settlers. Rationalism and Enlightenment treatises supporting the founding of the United States and establishment of its government, and the major writings of Emily Dickinson, Ralph Waldo Emerson, Henry David Thoreau, and Walt Whitman from the American Romantic tradition. The course will include multiple genres, including essays, poetry, short stories, and novels and will fulfill three hours of the nine

required humanities for an Associate of Arts degree. (Prerequisite: College level reading score on appropriate placement exam or completion of the COMM 90 sequence)

ENGL 235

Survey of American Literature II (3-0) 3 Credits

Selected readings in American literature from 1865 to the present. Periods of American Literature including Realism, Naturalism, Modernism, and Postmodernism will form the structure of the course and will include work by Mark Twain, Kate Chopin, John Steinbeck, Ernest Hemingway, and Arthur Miller among others. from the American Romantic tradition. The course will include multiple genres, including essays, poetry, short stories, and novels and will fulfill three hours of the nine required humanities for an Associate of Arts degree. (Prerequisite: College level reading score on appropriate placement exam or completion of the COMM 90 sequence)

ENGL 240

British Literature I (3-0) 3 Credits

This course will survey the major British authors and works from the Old English period to the eighteenth century, connecting the literature with the historical and cultural influences of the different periods. Readings will include authors such as Chaucer, Marlowe, Shakespeare, Donne, Milton, Swift, Pope, and other major British writers of the Middle Ages to 1790. (Prerequisite: College level reading score on appropriate placement exam or completion of the COMM 90 sequence)

ENGL 245

British Literature II (3-0) 3 Credits

This course will survey the major British authors and works from the Romantic Movement to the present day, connecting the literature with the historical and cultural influences of the different periods. Readings will include Wordsworth, Keats, Wollstonecraft, Tennyson, Browning, Woolf, Lessing and other influential British writers spanning from the Romantic Movement to the present. This course will include multiple genres, including essays, poetry, short stories, plays, and novels. (Prerequisite: College level reading score on appropriate placement exam or completion of the COMM 90 sequence)

FIRE SCIENCE (Offered only at Cassville)

FSCI 111

Firefighter I and II (4-4) F 6 Credits

This course places emphasis on those skills and related information necessary to develop a recruit firefighter into a usable member of the firefighting team. The course is divided into 21 subject areas. Recruit firefighters will gain essential knowledge through both lecture and practical skill development. Topics include: fire behavior, building construction, firefighter safety, rescue, extrication, fire control, hazardous materials, and EMS. Successful completion of this course will prepare recruit firefighters for the International Fire Service Accreditation Congress (IFSAC) Certifications for Firefighter I, Firefighter II, Hazardous Materials Awareness, and Hazardous Materials Operations.

GEOGRAPHY

GEOG 111

World Regional Geography (3-0) F,S 3 Credits

Emphasis in this study of regions and nations of the world includes geographical factors such as natural environments and human cultural patterns which affect life on the earth. Students successfully completing this course partially fulfill Social and Behavioral Science general education requirements.

GEOLOGY

GEOL 115

Introduction to Geology (3-2) 4 Credits

This class introduces students to the basic concepts of Geology. Students will use these concepts to gain an understanding of: (1) the Earth's dynamic processes of formation and change, (2) how those changes are reflected and identified as its geologic history, and (3) environmental challenges on the planet.

GEOL 210

Earth and Space Science for Teachers (2-4) 4 Credits

A laboratory intensive course designed to give students an understanding of the processes of science and the basic concepts of Earth science (Geology, Oceanography, and Atmospheric Science) and Astronomy. This course is designed primarily for students intending to major in elementary education. One-day field trips and some night-time astronomical observations will be required. (Prerequisite: PHYS 101)

GRAPHIC DESIGN

ART 190

Graphic Design I in Illustrator (2-4) 3 Credits

Graphic Design 1 is an introductory course into the world of art and design with an emphasis in learning and using Adobe Illustrator. Students will become proficient in using Illustrator while learning principles for making artwork and developing projects for a working portfolio. Students will learn page layout, illustrative and type skills, while apply those skills toward corporate or small business development and promotional scenarios. Warning: This is a project based class. (Required core for Graphic Design majors.) A course fee will apply.

ART 191

Graphic Design II in Photoshop (2-4) 3 Credits

Graphic Design 2 is an introductory course into the world of art and design with an emphasis in learning and using Adobe Photoshop. Students will become proficient in using Photoshop while learning principles for making artwork and developing projects for a working portfolio. Students will learn to create, alter, manage, and store digital images and creative illustrations, while apply those skills toward corporate or small business development and promotional scenarios. Warning: This is a project based class. (Required core for Graphic Design majors.) A course fee will apply.

ART 192

Graphic Design III in InDesign & Web Design (2-4) 3 Credits

Graphic Design 3 is an advanced course into the world of art and design with an emphasis in learning and using Adobe InDesign, as well as learning practical web design skills using all available software (including Facebook!). Students will become proficient in using InDesign and become comfortable with the ever-changing web design outlets while learning principles for making artwork and developing projects for a working portfolio. Projects will be based on real world scenarios with applications for a wide range of companies or small businesses. Warning: This is a project based class. (Required core for Graphic Design majors.) A course fee will apply. (Prerequisites: ART 190 and ART 191)

ART 193

Graphic Design in Typography (2-4) 3 Credits

Graphic Design Typography is an advanced course into the world of art and design with an emphasis in learning about, creating, and crafting beautiful letter forms, as well as learning practical professional knowledge in good type use, and how to create type and hand-crafted lettering. Students will become job ready while making artwork and developing projects for a working portfolio. Warning: This is a project based class. A course fee will apply. (Prerequisites: ART 190 and ART 191)

ART 194

Graphic Design IV in Portfolio & Professional Development (2-4) 3 Credits

Graphic Design 4 is an advanced course into the world of art and design with an emphasis in creating a strong portfolio for professional use. Students will also learning practical professional knowledge including resume building, interviewing skills and tips, and how to create and manage contracts, while learning about the history of graphic design and its styles. Students will become job ready while making artwork and developing projects for a working portfolio based on practical scenarios for potential companies or small business. Warning: This is a project based class. (Required core for Graphic Design majors.) A course fee will apply. (Prerequisites: ART 190, ART 191, and ART 192)

ART 195**Graphic Design Animation (2-4)****3 Credits**

Introduction to animation and the basics of film editing. Techniques and procedures for applying the principles of animation to produce 2D animated projects using motion graphics software for web and digital media outputs. Students will create a portfolio of animated projects with various applications. Lab fee required. (Prerequisite: ART 190 & ART 191)

HISTORY

HIST 101**Western Civilization I (3-0)****F,S****3 Credits**

In this history of Western Civilization from ancient times to the end of the Renaissance/Reformation era, the culture and institutional developments of the early civilizations and classical Europe are stressed. HIST 101 partially fulfills the Social and Behavioral Science or Humanities general education requirement, but not both simultaneously. (Prerequisite: Reading at least at college level)

HIST 102**Western Civilization II (3-0)****S****3 Credits**

Cultural developments and the growth of social and political institutions of the post-Renaissance/Reformation Western world are stressed. HIST 102 is a foundation course for understanding contemporary world problems. (Prerequisite: Reading at least at college level) (Note: HIST 101 is not a prerequisite for HIST 102)

HIST 106**U.S. History I (3-0)****F,S****3 Credits**

This introductory course surveys the development of American culture from the Colonial Period through Reconstruction. The growth of political, social and economic institutions is emphasized. Students successfully completing this course fulfill the Civics requirement in constitutional study within the Social and Behavioral Science general education requirements. (Prerequisite: Reading at least at college level)

HIST 107**U.S. History II (3-0)****F,S****3 Credits**

History 107 surveys United States economic, social, political and diplomatic history from Reconstruction to the late twentieth century. Students successfully completing this course fulfill the Civics requirement in constitutional study within the Social and Behavioral Science general education requirements. (Prerequisite: Reading at least at college level) (Note: HIST 106 is not a prerequisite for HIST 107)

HIST 111, 112, 113**Topics in History (1-3)****Upon Request****1-3 Credits**

These courses provide an opportunity to study selected History topics not covered in the History curriculum or to study in greater depth topics addressed in introductory History courses. The content of these courses may vary from semester to semester and some may require a prerequisite. Check with the Division Chair, instructor or advisor regarding prerequisites for a specific topic course. These courses will transfer but may or may not meet specific degree or program requirements at other institutions. (Prerequisite: Reading at least at college level)

HIST 224**Research and Writing in History (3-0)****S****3 Credits**

This course introduces students to the methods and the discipline of history as a field of scholarly inquiry. It trains students in historical research and writing, the evaluation and use of sources, the formation and support of arguments, the use of historical context, and schools of historical thought. (Prerequisite: HIST 101, HIST 102, HIST 106, or HIST 107; Reading at least at college level)

HONORS

HONR 151, 152, 251, 252**Honors Seminar****F,S****1-4 Credits**

Students who are participants in the honors program are required to participate in the Honors Seminar course. The class will utilize both a weekly online and traditional class format of instruction as students complete an in-depth examination of the current issues that follow the Phi Theta Kappa International honors topic for the year. For the

participants in 252, students will also complete a capstone project that requires research project in their major. (Prerequisite: Must be a participant in the Honors program or a member of Phi Theta Kappa)

HONR 103, 104, 203, 204**Special Topics in Honors****F,S****1-4 Credits**

Various topics and modes will be used to explore and research contemporary issues which are of interest and importance to society and the student. (Prerequisite: Meet criteria for Honors Seminar and permission of instructor)

ENGL 104**Honors English Composition****S**

This honors English course continues the study of clearly effective written expository essays for those who have successfully completed English 101 and are participants in the Crowder College Honors Program. In addition, students advance to study more complex methods of thesis development, particularly argument. Research and documentation procedures are integral subject matter. This course fulfills a portion of communications general education requirements and requires students to complete an additional research component for all honors program participants. (Prerequisite: Limited to honors program participants and completion of ENGL 101)

PLSC 104**National, State, Local Gov't- Honors (3-0)****F****3 Credits**

This is a political science class designed for honors students. The course content is the same as Political Science 103 except this class is writing intensive and, when appropriate, more varied instructional techniques will be used in this class. (Prerequisite: admission to Honors Program or consent of the instructor and reading at the college level)

HVAC

HVAC 115**Heating Fundamentals (2-2)****F****3 Credits**

This course introduces the student to different types of heating systems and controls. Study includes an overview of basic furnace design and principle of combustion. Emphasis is placed on safe operations of furnace equipment and combustible materials. Students will learn the basic elements of heating systems, heat laws, psychometrics, heating load estimating, design, and distribution.

HVAC 116**Heating Service (2-2)****F****3 Credits**

This course builds upon heating equipment concepts presented in HVAC 115 and focuses on servicing furnaces. Students will learn to maintain and troubleshoot various types of heating equipment systems. (Prerequisite: HVAC 115)

HVAC 120**Refrigeration Systems I (2-2)****F****3 Credits**

This course focuses on basic refrigeration principles and the basic refrigeration cycle that is contained in all coding systems, heat pumps and refrigeration equipment. Students will study the control systems for cooling systems and will gain knowledge in psychometrics and airflow. Students will also learn about the different types of air purification systems, ventilation and dehumidification. The course allows students to develop basic skills required for installation, maintenance and servicing HVAC/R equipment.

HVAC 121**Refrigeration Systems II (2-2)****F****3 Credits**

This course builds upon cooling equipment concepts presented in HVAC 120 and focuses on servicing cooling systems. Concepts also consist of load estimating, design, and distribution. Students learn air-conditioning theory including airflow and filtering principles, ventilation and dehumidification; installation practices for common AC systems and ductwork; troubleshooting and maintenance practices. This course provides an overview of various light commercial applications. This course will prepare students for the EPA section 608 exam. (Prerequisite: HVAC 120)

HVAC 125**Equipment Design (2-2)****F****3 Credits**

Students will gain knowledge in duct design, testing and balancing of airflow, fans and air handling equipment. They will learn about the

different types of air purification systems used to achieve a high level of air quality. Students will learn how to perform load calculations to insure proper equipment sizing for optimum system efficiency. In addition, students have hands-on projects covering sheet metal ductwork sizing, layout, and fabrication. Students will study design, installation, balancing, and selection of components for air distribution systems.

HVAC 130 **S**
HVAC Controls and Troubleshooting (2-2) **3 Credits**

This course covers advanced control circuits for commercial and residential heating, ventilation, air conditioning and refrigeration equipment. Diagnostic procedures involved advanced HVAC and R schematics, temperature controls, timing controls, modulating motors, heat pump controls, and other various HVAC and R electrical components will also be covered. Advanced troubleshooting techniques will be addressed. (Prerequisites: HVAC 116 and HVAC 121)

HVAC 135 **S**
Commercial Equipment and Applications (2-2) **3 Credits**

This course builds upon the knowledge and skills developed in HVAC 121 and focuses on refrigeration systems used in commercial and institutional applications. Topics that are covered include system controls, installation standards, piping design, operational procedures, and troubleshooting techniques for refrigeration equipment used in restaurants, convenience stores, supermarkets, hospitals, and cold-storage shipping. (Prerequisites: HVAC 116 and HVAC 121)

INFORMATION TECHNOLOGY

ITC 235 **S**
Computer Hardware and Operating Systems **3 Credits**

Topics for this course include components of a computer, the Windows operation system, and the Linux operation system.

ITC 260 **F**
Introduction to Java Programming **3 Credits**

This course provides an introduction to Java Programming and Object Oriented Programming concepts. We will cover a variety of programming topics that will prepare the student for advanced work in Java and it will provide a solid foundation for learning other programming languages and frameworks.

ITC 295 **S**
Database Management Systems, Concepts & Design **3 Credits**

This course will place emphasis on data modeling using entity-relationship and/or UML diagrams. Discussion and application of SQL to develop and query databases.

ITC 299 **S**
System Analysis and Design **3 Credits**

This course introduces the systems development life cycle (SDLC), the typical activities, procedures, methods and models used in developing an information system. The general objective of this course is to equip students with the skills to analyze user requirements and translate that into systems analysis and design specifications.

JOURNALISM AND PUBLIC RELATIONS

COMM 101 **Upon Request**
Introduction to Mass Communications (3-0) **3 Credits**

This course surveys the principles, history, and development of the mass media. The roles and effects of radio, television, newspapers, magazines, film, books, advertising, and the recording industry in the political, social, economic and philosophical life of today are examined.

COMM 102 **F**
Introduction to Public Relations (3-0) **3 Credits**

This course introduces students to the theory and principles of public relations. It is designed for students interested in public relations or related fields in mass communications.

COMM 105 **S**
Introduction to Human Communication (3-0) **3 Credits**

This course introduces students to the study and practice of communication. Areas covered include interpersonal, nonverbal, intercultural, mass media, group, and organizational communication. Students must demonstrate competency in research, an interview, group communication, and oral presentations as well as written and visual communication.

COMM 111 **S**
Magazine Production (2-2) **3 Credits**

This course involves students in the magazine process from the collection of raw material through layout and design to the circulation of the finished product. (Prerequisite or co-requisite: ENGL 101)

COMM 112 **S**
Magazine Production (2-2) **3 Credits**

This course involves students in the magazine process from the collection of raw material through layout and design to the circulation of the *Quill*, Crowder's community literary/art magazine. (Prerequisite: COMM 111)

COMM 150 **F**
Introduction to Journalism (3-0) **3 Credits**

This is a hands-on course in which the student newspaper is used as a model for journalism, including research, observation, interviewing, writing, and critical thinking. Use of technology is emphasized for layout, design, photography, blogs, social media, audio, and video production. (Prerequisite: Basic computer and keyboarding skills are necessary; Co-requisite or prerequisite: ENGL 101)

COMM 151 **F,S**
News and Feature Writing (2-2) **3 Credits**

Students engage in advanced writing and journalism techniques in production of the school newspaper. Use of technology is emphasized for advanced techniques in layout, design, photography, blogs, social media, audio, and video production. (Prerequisite: COMM 150)

COMM 152 **Upon Request**
Applied Journalism (1-0) **1 Credit**

By special arrangement with the instructor, students may work on the *Sentry* for one hour credit. They may work as a reporter, photographer, ad salesperson or computer operator. Students work independently through instructor assignments. Prerequisite or co-requisite: ENGL 101)

COMM 171, 172, 173, 271, 272, 273 **SDL/Upon Request**
Topics in Communication (2-0) **1-3 Credits**

This course involves the study of selected topics in communication, journalism, and media-related fields that require greater emphasis, different methodology or are not covered in regular classes. Topics are identified by title in the class schedule. May be repeated if a different topic is covered.

COMM 211 **S**
Magazine Production I (3-0) **3 Credits**

This course is designed for students who wish to continue their participation in the publication of the *Crowder Quill*. (Prerequisite: COMM 111 and 112)

COMM 212 **S**
Magazine Production II (3-0) **3 Credits**

This course is designed for students who wish to continue their participation in the publication of the *Crowder Quill*. (Prerequisite: COMM 211)

COMM 220 **F,S**
Photocommunication I (3-0) **3 Credits**

An introduction to the essential processes and practices of photography, this course emphasizes digital imaging and manipulation as well as photojournalism principles and skills. Students are expected to provide their own digital single-lens reflex (DSLR) camera. Students should have a basic understanding of computer functions prior to enrolling in the class.

COMM 225
Internship (0-8)

Upon Request
3 Credits

Students enrolled in this course gain first-hand experience on the job working 135 hours during the term in a program designed by the sponsor, student, and instructor as a capstone experience. Internships may be completed in newspaper techniques, broadcast, advertising, public relations, or other approved media-related fields. (Prerequisite: Successful completion of at least 15 credits in a related field and instructor approval. Pass/Fail)

COMM 231

Photocommunication II (3-0)

S
3 Credits

This course continues COMM 220 (Photocommunication I) with further emphasis on lighting and shooting procedures as well as digital darkroom techniques, such as editing, enhancing, and manipulation. Emphasis will also be placed on storytelling with newsworthy images. Students are expected to provide their own digital single-lens reflex (DSLR) camera. (Prerequisite: COMM 220)

COMM 250

Computer Journalism, Layout and Production (2-2)

F,S

3 Credits

This course places emphasis upon the use of the computer, using desktop publishing programs. *The Sentry* will provide practical journalistic experience. (Prerequisite: COMM 150, COMM 151)

COMM 251

Journalistic Editing (2-2)

F,S

3 Credits

Emphasis is placed upon the practices and principles of copy reading, headline writing, illustration, staff selection, copy layout and printing through editorial experience on the *Sentry*. (Prerequisite: COMM 150)

COMM 252

Applied Journalism (1-0)

Upon Request
1 Credit

By special arrangement with the instructor, students may work on the *Sentry* for one-hour credit. Students work independently through instructor assignments. (Prerequisite: COMM 152)

LANGUAGES

ASL 101

Beginning American Sign Language I (3-0)

F,S
3 Credits

Beginning American Sign Language (ASL) I will focus on developing conversational skills between deaf and hearing individuals using both fingerspelling and ASL manual signs. Comprehension skills and linguistic features of the ASL language will be emphasized. This class may apply toward the Humanities General Education requirement, or may apply toward a foreign language requirement for a bachelor of arts, but may NOT apply toward both.

ASL 102

Beginning American Sign Language II (3-0)

S
3 Credits

Beginning American Sign Language (ASL) II will continue the development of ASL skills. Expressive and ASL receptive communication will be enhanced. Additional ASL vocabulary will be learned. (Prerequisite: ASL 101) This class may apply toward the Humanities General Education requirement, or may apply toward a foreign language requirement for a bachelor of arts, but may NOT apply toward both.

FREN 101

Beginning French (3-0)

3 Credits

This is a multimedia course that combines video, audio and print to teach French language and culture. It immerses the student in current, living French in everyday situations, spoken by natives. Its focus is on communication and proficiency. This class may apply toward the Humanities General Education requirement, or may apply toward a foreign language requirement for a bachelor of arts, but may NOT apply toward both. Not offered at the Neosho campus.

SPAN 101

Beginning Spanish (3-0)

F,S
3 Credits

This is a multimedia course that combines video, audio, interactive software, and print to teach Spanish language and culture. It immerses the student in current, living Spanish in everyday situations, spoken by natives. Its focus is on communication proficiency. This class may apply toward the Humanities General Education requirement, or may apply toward a foreign language

requirement for a bachelor of arts, but may NOT apply toward both.

SPAN 102

Beginning Spanish II (3-0)

F,S
3 Credits

This course continues the study of Spanish language and culture. It immerses the student in current, living Spanish in everyday situations. Its focus is on communication proficiency. This class may apply toward the Humanities General Education requirement, or may apply toward a foreign language requirement for a bachelor of arts, but may NOT apply toward both. (Prerequisite: SPAN 101 or permission of the instructor)

SPAN 103

Introduction to Hispanic Culture (3-0)

3 Credits

This course offers a brief introduction to Hispanic culture through examples of art, journalism, literature and music from and about Spain and Latin America. Knowledge of Spanish is not required.

SPAN 105

Conversational Spanish (3-0)

F
3 Credits

This course is geared to those who have knowledge of the Spanish language. This course emphasizes idiomatic usage, vocabulary, grammar, and syntax. There is a focus on acquisition and development of skills necessary for effective oral and written communication. Hispanic culture, history, art, and literature will be highlighted in course materials, student presentations, and writing assignments. The material covered in this course is designed not only to meet the educational needs of traditional students of the language, but also the needs of the heritage language speakers who enter the Spanish program with some or all of the four language skills developed to varying degrees. Students will be required to log conversation hours with the instructor and classmates. Students will be required to pay for and take the computerized Oral Proficiency Interview (OPIC). This assessment costs \$115, and scholarships are available through the Spanish department. (Prerequisites: SPAN 102 or equivalent)

SPAN 106

Basic Conversational Spanish II (3-0)

S
3 Credits

This is a continuation of Conversational Spanish I (SPAN 105) that includes conversational practice and cultural, historic, art and literary readings and discussions with student presentations and writing assignments. Students will be required to log conversation hours with the instructor and classmates. This class may apply toward a major requirement for an A.A. in Spanish. (Prerequisite: SPAN 105 or equivalent)

SPAN 111

Introduction to Spanish for Health Care Workers 3 Credits

This is a multimedia course that combines video, audio, and print to introduce students to medical terms and elementary non-medical expressions in Spanish. This course is designed for students who work/plan to work in health care and who want to learn Spanish phrases as related to their daily activities. The course activities are divided into 2 major sections: First, basic language skills that are taught using the textbook, "an Introduction to Spanish for Health Care Workers"; Second, the memorization of dialogs related to specific medical tasks (e.g., assessing medical history, assessing health risks, making appointments, etc.). All health care workers/students who are interested in acquiring the basic Spanish skills as related to their daily activities are encouraged to enroll in this course. Students who are interested in acquiring the Spanish language in general are invited to enroll in traditional Spanish language (grammar) courses. This class may apply toward a major requirement for an A.A. in Spanish.

SPAN 112

Introduction to Spanish for Health Care Workers II 3 Credits

This is a multimedia course that combines video, audio, and print to introduce students to medical terms and elementary non-medical expressions in Spanish. This class may apply toward a major requirement for an A.A. in Spanish. (Prerequisite: SPAN 111 or permission of instructor)

SPAN 107, 108, 109, 207, 208, 209

Topics in Spanish

SDL
1-3 Credits

This course covers topics not normally included in another class. Prerequisites are determined by the department and stipulated in the

syllabus for each specific offering. May be repeated. These classes may apply toward major requirements for an A.A. in Spanish.

SPAN 201 **S**
Intermediate Spanish (3-0) **3 Credits**
 This course continues the study of Spanish language and culture. It immerses the student in current, living Spanish in everyday situations. Its focus is on communication proficiency. This class may apply toward a major requirement for an A.A. in Spanish or may apply toward a foreign language requirement for a bachelor of arts. (Prerequisite: SPAN 102 or permission of instructor)

SPAN 202 **S**
Intermediate Spanish II (3-0) **3 Credits**
 This course continues the study of Spanish language and culture. It immerses the student in current, living Spanish in everyday situations. Its focus is on communication proficiency. This class may apply toward a major requirement for the A.A. in Spanish or may apply toward a foreign language requirement for a bachelor of arts. (Prerequisite: SPAN 201 or permission of instructor)

LEARNING OPPORTUNITIES

COMM 91, 92, 93, 94 **F,S**
Developmental Communication Arts (0-4) **2 Credits**
 This course provides integrated reading and writing and college success instruction. The course includes success strategies for disciplines across the curriculum, advanced critical reading skills to facilitate comprehension of academic text, discipline specific vocabulary, and utilization of the writing process to compose paragraphs utilizing the standards of conventional writing for academic purposes. College success knowledge, skills, and dispositions are integrated throughout the course. The course is offered on a credit / no credit basis. Mastery of at least twenty-five percent of the course competencies is required to earn the two hours credit. These credits cannot be applied to requirements for graduation. A letter grade will not be given, and there will be no impact on the student's grade point average. A course fee will apply.

ELI 30 **F,S**
ELI Basic I (6-0) **6 Credits**
 This course provides non-native speakers with intensive training in basic English skills to acquire vocabulary and apply knowledge of the English language structure and mechanics to understand basic spoken English, participate in oral communication at the beginning level, comprehend brief, simplified printed material, and produce short, clear and logical written text. (Placement by Assessment) A course fee will apply.

ELI 32 **F,S**
ELI Basic 2 (6-0) **6 Credits**
 This course provides non-native speakers with intensive training in basic, moving towards more complex and intermediate, English skills to acquire vocabulary and apply knowledge of the English language structure and mechanics to understand basic spoken English, participate in oral communication at the beginning level, read simplified printed material, and produce clear and logical written text. A course fee will apply. (Placement by Assessment)

ELI 33 **F,S**
ELI Intermediate (6-0) **6 Credits**
 This course provides non-native speakers with intensive training in intermediate English skills to acquire vocabulary and apply knowledge of the English language structure and mechanics to understand spoken English, participate in oral communication at the intermediate level, comprehend simplified printed material, and produce clear and logical written text. (Prerequisites: ELI 30 and ELI 32 and/or placement by assessment) A course fee will apply.

ELI 35 **F,S**
ELI Advanced (3-0) **3 Credits**
 This course provides non-native speakers with intensive training in advanced English skills to acquire vocabulary and apply knowledge of the English language structure and mechanics to understand spoken English, participate in oral communication at the advanced level, comprehend printed material, and produce clear and logical written text. (Prerequisites: ELI 33 and/or placement by assessment)

ELI 37, 38, 39, 40 **F,S**
ELI Special Topics (3-0) **3 Credits**
 This course provides non-native speakers with specialized training in a focused set of English language skills. The special topics covered will be determined by the student's current language proficiency and expressed language acquisition goals in cooperation with the ELI instructor. (Prerequisites: ELI 30 and ELI 32 and/or placement by assessment)

LOC 100 **F,S**
College Success (3-0) **3 Credits**
 This course is designed to increase success in college by assisting students in the acquisition and mastery of skills necessary for students to reach their personal and educational goals. Course topics include time and stress management, test taking, communication skills, study techniques, question-asking skills, community resources, college transfer issues, career planning, budget planning, and personal issues that they may face as a college student. A course fee will apply.

LOC 103 **F,S,SU**
College Connections (3-0) **3 Credits**
 College Connections is designed as an academic intervention and application course. The course is required for students on academic probation. This course will assist students in the acquisition and mastery of implementing many proven strategies to create greater academic, professional, and personal success. Individual and group discussions, activities, and assignments, guided journal writing, as well as personal one-on-one meetings are part of the course. A grade of "C" or higher is required to meet academic status requirements. (Prerequisite: Only students on academic probation or returning from suspension may enroll in this course) A course fee will apply.

LOC 105 **1 Credit**
Career Directions (1-0)
 This course is designed to help students discover what their personal interests, values, and talents are, and to learn how to use this knowledge to help them in choosing a career. Taking this course can shape their educational experiences at Crowder College and help them understand how career choices can impact their lifestyle. (Course location varies)

LOC 206 **1 Credit**
Career Exploration (0.5-1.25)
 This course provides students with the opportunity to refine their career plan, to practice job search skills such as interviewing and professional communication, and to evaluate their career goals. Students will complete a combination of an eight hour equivalent of class meetings and twenty hours of on-site field experience. (Course location varies)

MANAGEMENT

BMGT 115 **F,S**
Customer Service (3-0) **3 Credits**
 This course covers the critical workplace skills necessary for providing effective customer service in today's professional environment. Areas covered include identifying customers, problem solving, listening, communicating with customers, etiquette, time management, teamwork, and telephone skills.

BMGT 175 **F,S**
Management (3-0) **3 Credits**
 This course is an introduction to the management of organizations of various sizes. The focus is on the four management functions: planning, organizing, leading, and controlling, and how to deal with the constant state of change in the workplace and in the competitive environment.

BMGT 200 **F,S**
Marketing (3-0) **3 Credits**
 This course is an introduction to the marketing process and organization of different types of businesses. The focus is on the identification of the marketing techniques and attitudes necessary to make a marketing plan successful. This course provides a detailed examination of the strategies necessary for businesses to compete in today's environment. This class will also examine various marketing

tactics including pricing, promotion, advertising, and salesmanship.

BMGT 223 **F**
Business Ethics (3-0) **3 Credits**
 The focus of this course will be the ethical dilemmas faced by businesses. The methods used to evaluate ethical alternatives can be applied by the students to their individual situations as well as in preparation to direct companies in ethical decision-making.

BMGT 285 **S**
Human Resource Management (3-0) **3 Credits**
 This course emphasizes various uses of a firm's human resources. Personnel Management evaluates and compares personnel policies in recruiting, selecting, transferring, promoting, classifying, motivating and training. (Prerequisite: BSAD 150)

BMGT 290 **Upon Request**
Business Management Internship (1-2) **2 Credits**
 Supervised work experience allows the student to apply skills in an actual business or office situation. Students will be required to gain experience in the area in which they are seeking a degree. Students will meet once a week in class and will work 80 hours during the semester in supervised work experience. This course should be taken during the student's final semester.

BMGT 197, 198, 199, 297, 298, 299 **As Needed**
Topics in Business Management (1-3) **1-3 Credits**
 Instruction will be provided as the need arises on topics in Business Management. Topics are identified by title in the class schedule. This course may be repeated if the topic is different.

MATHEMATICS

MATH 80 **F,S**
Support for Quantitative Reasoning (2-0) **2 Credits**
 This course is a co-requisite to Quantitative Reasoning (MATH 125). It is designed to provide additional support and just-in-time instruction on skills needed for students to succeed in MATH 125. This course will not count towards degree requirements.

MATH 85
Support for Elementary Statistics (2-0) **2 Credits**
 This course is a co-requisite to Elementary Statistics (MATH 130). It is designed to provide additional support and just-in-time instruction on skills needed for students to succeed in MATH 130. This course will not count towards degree requirements.

MATH 100 **F,S**
Intermediate Algebra (3-0) **3 Credits**
 This preparatory course is for students whose placement scores indicate a need for additional algebra. Topics include linear equations, graphing, systems of equations and polynomials. This course will not satisfy most degree requirements for mathematics. It will count as an elective on your transcript. (Prerequisite: An appropriate math placement score)

MATH 104 **F**
Technical Mathematics (3-0) **3 Credits**
 Technical Mathematics applies practical concepts of mathematics to a variety of real world problems. This class is specifically designed to meet the needs of students in the college's AAS Technology programs. This class will not satisfy the general education requirement for an Associate of Arts degree. (Prerequisite: An appropriate math placement score)

MATH 108 **F,S**
Basic and Intermediate Algebra (5-0) **5 Credits**
 This course provides students with the same algebraic skills discussed in MATH 100 (Intermediate Algebra) with additional review and practice of elementary algebraic skills. Topics include: introduction to exponents and polynomials, equations, inequalities, applications, graphing, functions, and systems of equations. This course will not satisfy most degree requirements for mathematics. It will count as an elective on your transcript. (Prerequisite: An appropriate math placement score)

MATH 112 **F,S**
Trigonometry (3-0) **3 Credits**
 Trigonometry involves the study of the six trigonometric functions and their applications. (Prerequisite: MATH 100 or an appropriate placement score)

MATH 125 **F,S,SU**
Quantitative Reasoning (3-0) **3 Credits**
 This course studies the skills necessary to process and communicate quantitative information found in daily life. Specific topics include: probability, statistics, proportional reasoning, modeling data, financial mathematics, and problem solving. (Prerequisite: An appropriate math placement score)

MATH 130 **3 Credits**
Elementary Statistics (3-0)
 This is a first course in statistics for any student whose college and career paths require knowledge of the fundamentals of the collection, analysis, and interpretation of data. Topics include the presentation and interpretation of univariate 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. Emphasis is placed on the development of statistical thinking. (Prerequisite: Placement by appropriate placement score)

MATH 135 **F,S**
Algebra for Calculus (3-0) **3 Credits**
 This course studies the foundations of functions, analysis of functions, algebraic reasoning, and conic sections. It is designed for students who intend to pursue a degree in the fields of Science, Technology, Engineering, or Mathematics, as well as other fields that require a high level of algebraic reasoning. This course is intended to prepare students for higher level mathematics courses. (Prerequisite: Placement by an appropriate placement score)

MATH 150 **F,S**
Calculus I, Part I (2-0) **2 Credits**
 This course begins a sequence of calculus and analytical geometry courses. Topics include the derivative and its applications. (Prerequisite: MATH 135 (may be taken concurrently) or an appropriate placement exam score; MATH 112 (may be taken concurrently) or an appropriate placement score.)

MATH 160 **S**
Calculus I, Part II (3-0) **3 Credits**
 This course continues the study of Calculus, including applications of the derivative, L'Hopital's Rule, and the integral. (Prerequisite: MATH 150)

MATH 201 **F**
Calculus II (5-0) **5 Credits**
 This course continues the calculus/analytic geometry sequence. Topics include various methods and applications of integration, sequences and series, parametric curves and the polar coordinate system. (Prerequisite: MATH 160)

MATH 202 **S**
Calculus III (5-0) **5 Credits**
 This course completes the calculus/analytical geometry sequence. Topics include vectors, vector-valued functions, graphing in three dimensions, calculus of multiple variables, line and surface integrals. (Prerequisite: MATH 201)

MATH 210 **S**
Differential Equations (3-0) **3 Credits**
 Differential Equations provides methods for the solution of standard types of ordinary first and second order differential equations. The use of numerical techniques, the Laplace transform, power series and linear methods of solution are examined. (Prerequisite or co-requisite: MATH 202)

Math 271, 272, 273**Topics in Mathematics****1-3 Credits**

A variable content course with areas of study that reflect current issues. Topics are identified in the course schedule and prerequisites are spelled out in the syllabus. (Prerequisite: Permission of department)

MISSOURI HIGHER ED CIVICS EXAMINATION

CVCS 101**Missouri Higher Ed Civics Examination****F,S,SU****0 Credit**

Missouri Higher Education Civics Examination In compliance with Missouri State Senate Bills 807 & 577 (2018) Section 170.013, "Any student entering a public institution of higher education for the first time after July 2019 who is pursuing an associate's or bachelor's degree from such institution shall successfully pass an examination on the provisions and principles of American civics with a score of seventy percent or greater as a condition of graduation from such institution." The examination will consist of fifty questions and will be similar to those administered to applicants for the United States citizenship. Subject matter will include the United States Constitution, Bill of Rights, other amendments, and governmental institutions.

MUSIC

MUSC 101**Music Appreciation (3-0)****F,S,SU****3 Credits**

This survey of the development of music from the Middle-Ages to the present includes an examination of the cultural forces which shaped the musical expressions of each era. The course is designed to provide the students with the musical vocabulary and listening techniques for a meaningful and enriching understanding and appreciation of music literature.

MUSC 195, 196, 295, 296**Community Mixed Chorus (0-4)****F****1-2 Credits**

This course welcomes all students and community residents. Weekly rehearsals are scheduled in preparation for public performance on off-schedule basis.

MUSIC, APPLIED**Private Lessons (Open to All Students)****F,S****1 Credit**

This course will provide individual instruction in vocal technique (i.e. breathing, breath support, tone production), while also covering the stylistic elements of performance, stage presence, vocal diction and other aspects of singing. Private voice lessons are open to all students. One half-hour lesson per week = 1 credit hour. One hour lesson per week = 2 credit hours. A course fee will apply.

MUSC 120, 121, 220, 221 Piano
MUSC 140, 141, 240, 241 Voice
MUSC 180, 181, 280, 281 Guitar

2 Credits

MUSC 122, 123, 222, 244 Piano
MUSC 142, 143, 242, 243 Voice
MUSC 182, 183, 282, 283 Guitar

PRACTICAL NURSING

PN 150**Personal & Vocational Concepts I (3-0)****3 Credits**

Concepts emphasized are those relating to stress, time management, study skills, nursing history, nursing process, personal & social wellness, therapeutic communications, cultural & spiritual differences.

PN 151**PN Human Structure & Function (3-1)****4 Credits**

This course is designed to furnish the beginning student with a basic understanding of how the parts of the body are structured & how they perform the complex functions necessary to maintain life. Vocabulary & spelling are stressed. This course provides the basis for other nursing courses.

PN 152**Fundamentals in Nursing I (3-1)****4 Credits**

Introduction of skills & concepts that allows performance of basic patient care. Included are theories of wellness, physical & emotional support of patients, safety issues, medical vocabulary, growth & development principles, and skill check-offs.

PN 153**Fundamentals in Nursing II (3-2)****5 Credits**

Building on the skills of Fundamentals I, this course presents more complex nursing skills in classroom and laboratory. Skill competency, CPR, time management, scenarios, therapeutic relationships, and direct patient care are performed in a patient care setting with direct supervision. The IV therapy major emphasis is to prepare the LPN to participate in IV fluid therapy. Student must pass IV therapy final examination with an 85% or better in order to graduate from the PN program as required by MO rule 4 CSR 200-3.100. (Prerequisite: PN 152)

PN 154**Medical Surgical Nursing I (4-0)****4 Credits**

Instruction involves scientific principles associated with illness, effects on body systems & current trends in patient care. Course will include both nutritional and pharmacological aspects that apply to each disease/disorder. (Prerequisite: PN 151)

PN 155**Introduction to Pharmacology (5-0)****5 Credits**

This course includes an assessment of current knowledge of simple multiplication, division, fractions, decimals, and percentages. Rounding rules will be discussed. Course also covers principles of drug actions and interactions, the nursing process as it relates to pharmacology, patient education and health promotion, medication calculations, principles of medication administration and an introduction to drug classifications. Students must pass a Math for Meds final with a 90% or above to remain in this nursing program.

PN 156**Gerontology (3-0)****3 Credits**

Modification of nursing skills to maintain & optimize the quality of life of the aging client is stressed.

PN 250**Fundamentals in Nursing III (0-8) 8 Credits**

Continuing the progression from most basic to more complex, this course extends into the realm of clinical nursing practice. Previously learned skills, care mapping, and problem-solving methods are transferred to patient care in a variety of clinical settings and under direct supervision. Leadership skills are enhanced by using the knowledge gained and the supervision of preceptors and instructors. Students participate in scheduled activities such as preschool screening, case study, and simulation scenarios. Prerequisite is successful completion of Fundamentals of Nursing I, II, and III. (Prerequisite: PN 153)

PN 251**Medical Surgical Nursing II (10-0)****10 Credits**

Building on the skills of Medical/Surgical Nursing I, instruction involves scientific principles associated with illness, effects on body systems & current trends in patient care. Course will include both nutritional and pharmacological aspects that apply to each disease/disorder. (Prerequisite: PN 154)

PN 254**Personal & Vocational Concepts II (2-0)****2 Credits**

This course places a primary emphasis on professional accountability, leadership roles and responsibilities, legal and ethical issues, and the concept of productive team functioning. Interactive opportunities are provided for students to develop a resume and participate in a mock job interview. (Prerequisite: PN 150)

PN 255**Mental Health & Mental Illness (3-0)****3 Credits**

This course is designed to enable students to recognize maladaptive behaviors and ineffective coping mechanisms. The significance of therapeutic use of self in developing trusting relationships/rapport with patients is emphasized; as well as the necessity for professional boundaries.

PN 256**Maternal-Child Nursing (5-0)****5 Credits**

This course is designed to provide students with the skills and scientific knowledge base to perform basic patient care for the maternal-child population in a variety of settings. Basic maternity concepts and special needs of the child during illness, along with these effects on the progress of normal growth and development are explored. Critical thinking and ethical decision-making are stressed.

REGISTERED NURSING

NURS 111**Health Concepts IA (2.5-0.5)****3 Credits**

This course introduces students to beginning nursing concepts for health promotion. Emphasis is placed on basic assessment skills and the ability to safely perform foundational psychomotor skills. (Prerequisite: BIOL 152)

NURS 112**Health Concepts IB (2.5-0.5)****3 Credits**

This course introduces students to therapeutic communication, normal growth and development, and safe, evidence-based interventions through application of the nursing process. Students will also have the opportunity to continue developing psychomotor nursing skills needed to assist individuals in meeting basic human needs. (Prerequisites: NURS 111)

NURS 121**Health Concepts IIA (2-2)****4 Credits**

This course focuses on beginning prioritizations skills when caring for the patient throughout the lifespan experiencing commonly occurring acute and chronic illnesses, including common medical-surgical and mental health problems. Students will have the opportunity to apply this knowledge in a variety of health care experiences. (Prerequisites: NURS 112)

NURS 122**Health Concepts IIB (3-1)****4 Credits**

This course will provide focus on perinatal care with normal variances. Assessment and care of the maternal-child client will be a primary focus on this course. Students will have the opportunity to apply this knowledge in a variety of health care experiences. (Prerequisites: NURS 121 & NURS 142)

NURS 141**Pharmacology I (1-.50.5)****2 Credits**

This course introduces students to beginning nursing concepts for Pharmacology. Emphasis is placed on basic principle skills and the ability to safely perform basic medication administration and dosage calculations. (Prerequisite: NURS 171)

NURS 142**Pharmacology II (1-0)****1 Credit**

This course continues to focus on the nurse's role in medication safety, administration, and calculations for drugs given to patients experiencing acute and chronic illnesses across the lifespan. Medications given in maternal-child health settings will also be discussed. (Prerequisite: NURS 141)

NURS 171**Professional Concepts I (1-0)****1 Credit**

This course introduces students to the role of the professional nurse, focusing on QSEN and core curricular concepts.

NURS 172**Professional Concepts II (1-0)****1 Credit**

This course builds on concepts learned in PN 1 and further explores professional nursing including concepts of legal issues, ethics in nursing care, healthcare organizations, and clinical judgement. (Prerequisite: NURS 171)

NURS 201**LPN to RN Transition (2-0)****2 Credits**

This course is designed for the licensed practical nurse entering into professional nursing. The course provides essential concepts and skills to facilitate the assimilation of knowledge and incorporation of the professional nursing role for currently licensed practical nurses that have been selected for admission to the Associate Degree of

nursing program. (Prerequisites: BIOL 152, COLL 101, MATH 125, 130 or 135; Co-requisite: BIOL 220 & 252)

NURS 211**Health Concepts IIIA (2-2)****4 Credits**

This course builds on concepts learned in earlier courses by focusing on prioritizing and collaborating nursing care if patients with acute and chronic complex health problems across the life span. Students will have the opportunity to apply this knowledge in a variety of health care experiences. (Prerequisites: NURS 122, NURS 142 & NURS 172)

NURS 212**Health Concepts IIIB (2-2)****4 Credits**

This course focuses on inter-professional collaborative care of patients with multi-system health problems, including patients who are acutely and critically ill across the lifespan. In this course, the student applies previously learned concepts and theories related to the care of individuals, families or groups experiencing a critical disruption in one or more needs. Students will have the opportunity to prioritize and translate this knowledge in a variety of health care experiences. (Prerequisite: NURS 211)

NURS 221**Health Concepts IV (2-1)****3 Credits**

This course focuses on inter-professional collaborative care of patients with multi-system health problems, including patients who are acutely and critically ill across the lifespan. In this course, the student applies previously learned concepts and theories related to the care of individuals, families or groups experiencing a critical disruption in one or more needs. Students will have the opportunity to prioritize and translate this knowledge in a variety of health care experience. (Prerequisite: NURS 212)

NURS 241**Pharmacology III (1-0)****1 Credit**

This course focuses on nursing interventions associated with medications used for patients experiencing complex medic-surgical, and mental health problems. (Prerequisite: NURS 142)

NURS 242**Pharmacology IV (1-0)****1 Credit**

This course builds on previous pharmacology courses within the program with emphasis on medications and dosage calculations for adult patients with multi-system and emergent health problems. (Prerequisites: NURS 241)

NURS 271**Professional Concepts III (2-0)****2 Credits**

This course expands the student's appreciation for the role of the nurse leader and manager of care in a variety of health care organizations. (Prerequisite: NURS 172)

NURS 290**Nursing Capstone (1.5-0.5)****2 Credits**

This course will examine State Licensure and NCLEX testing processes. Clinical simulation will be utilized to assess individual clinical reasoning and judgment. (Prerequisites: NURS 221, NURS 242)

OCCUPATIONAL THERAPY ASSISTANT

(Offered only at Webb City)

OTA 101**Principles of Occupational Therapy (2-0)****S
2 Credits**

This course will examine the role of occupational therapy in health care, community-based and educational systems. Topics include: history, philosophical principles, the *Occupational Therapy Framework: Domain and Process, Standards of Practice, Code of Ethics*, current and emerging practice areas. This course will also address the roles of the registered occupational therapist, certified occupational therapy assistant, national and state credentialing requirements, and occupational therapy association functions at all levels. A course fee will apply. (Co-requisites: OTA 111 & OTA 116)

OTA 116 **S**
Principles of Therapeutic Intervention (2-2) **3 Credits**
 This course covers basic understanding of relevant occupations and purposeful activities used in occupational therapy programs. Lab work performed relates to children and adult occupations and activities. These include, but are not limited to: leather craft, beading, basic woodworking and rehabilitation technology with an emphasis on meaningfulness to the client to encourage participation and independence. These activities are related to the domains of occupational therapy. Activity analysis, group activities, activity adaptation, application of the Practice Framework, maintenance of the Occupational Therapy (OT) service environment, and teaching/lifelong learning are incorporated. A course fee will apply. (Co-requisites: OTA 101 and OTA 111)

OTA 125 **S**
Occupational Therapy Documentation (2-0) **2 Credits**
 This course will examine documentation of occupational therapy services. This course will include use of professional language and proper documentation for Occupational Therapy Services. This course will address understanding and writing of documentation, electronic documentation, and goal writing in diverse Occupational Therapy settings. (Co-requisites: OTA 101 & OTA 116)

OTA 131 **F,S**
Functional Movement: Occupation and Adaption (2-2) **3 Credits**
 This course will present the basic principles of biomechanics and kinesiology related to human movement and occupational performance. To analyze functional movement required for work, self-care, and play this course will study the interrelationship among the central nervous system, peripheral nervous system, musculoskeletal system, anatomical landmarks, joints, posture, balance, and locomotion. A course fee will apply. (Prerequisite: BIOL 252 and MATH 125, 130 or 135; Co-requisites: OTA 140 and OTA 201)

OTA 199 **F,S**
Occupational Therapy: An Overview (1-0) **1 Credits**
 This course will introduce the profession of Occupational Therapy. This course provides an overview of the history, philosophy, and role of Occupational Therapy in the health care environment as well as describing the educational requirements of Occupational Therapy practitioners.

OTA 201 **F**
Principles of Occupational Therapy Practice: Children and Adolescents (4-2) **5 Credits**
 This course will provide a review of human development from birth through adolescence, with emphasis on occupational performance of typical and atypical individuals. Topics include: theory and application, frames of reference, observation skills, assessment, adapting, intervention, documentation, the occupational therapy process, evidence-based practice, ethics and roles of the Occupational Therapist and Occupational Therapy Assistant in service delivery and in various practice settings. A course fee will apply. (Prerequisite: OTA 116; Co-requisites: OTA 131 and OTA 140)

OTA 211 **S**
Principles of Occupational Therapy Practice: Mental Health (3-4) **5 Credits**
 This course will examine the occupational therapy process in relation to individuals with psychosocial challenges across the lifespan and focus on observation skills, assessment, documentation, teaching, adapting, and grading self-care, work, play/leisure occupations for individuals and groups with psychosocial challenges. Topics include: clinical features, group dynamics, therapeutic use of self, interventions, evidence-based practice, ethics, and issues impacting psychosocial Occupational Therapy practice. This course includes Level I fieldwork component consisting of eight hours a week for 6 weeks in a practice setting. A course fee will apply. (Prerequisite: OTA 116; Co-requisites: OTA 236 and OTA 221)

OTA 218 **S**
Occupational Therapy Test and Fieldwork Preparation (1-0) **1 Credit**
 This course is designed to prepared individuals for their national certification test and Level II fieldwork experiences. This course will

include examination of the steps needed to register for the national certification test and the use of problem solving skills to improve performance on the test. This course will address the guidelines required for Level II fieldwork experiences and reinforcement of professional behavior. (Prerequisite: OTA 201; Co-Requisite: OTA 236 and OTA 221)

OTA 221 **S**
Principles of Occupational Therapy Practice: Physical Rehabilitation (3-4) **5 Credits**
 This course will focus on the occupational therapy (OT) process in relation to persons with physical disabilities, development of observation skills, assessment, treatment, teaching, adapting, grading self-care, work, and play/leisure occupations for individuals with physical challenges. Topics include techniques and equipment to maximize participation in meaningful occupations, improve independence, ensure safety, prevent deformity and other issues impacting physical rehabilitation OT practice. A course fee will apply. (Prerequisite: OTA 131; Co-Requisites: OTA 211 and OTA 236)

OTA 228 **S**
Occupational Performance Across the Lifespan(3-0) **3 Credits**
 This course will focus on the observations, analysis, and performance of human occupations in work, self-care, and play/leisure throughout the life span. The teaching and learning process and the language of occupational therapy will be incorporated. (Co-requisites: OTA 101 and OTA 116)

OTA 236 **F,S**
Occupational Performance Issues in Later Adulthood (3-2) **4 Credits**
 This course will cover Occupational Therapy (OT) related geriatric issues. Topics include: study of the normal aging process, physical, psychosocial and cognitive dysfunctions common to the elderly, OT practice framework domain, process and therapeutic intervention with the geriatric population. This course will emphasize the importance of patient, family and caregiver education. A course fee will apply. (Prerequisite: OTA 140; Co-requisites: OTA 211 and OTA 221)

OTA 240 **F**
Fieldwork Level II—A (0-12.5) **5 Credits**
 Students will complete level II fieldwork for 35-40 hours a week for eight weeks. This is required in a supervised fieldwork experience applying occupational theory, skills, and concepts at an off-campus designated site. Students will use the occupational therapy process while developing and practicing the skills of an entry-level Occupational Therapy Assistant. Students are assigned to a particular setting working with individuals with developmental, physical, or emotional challenges. Students are responsible for their own transportation, room and board. A course fee will apply. (Prerequisite: OTA 221)

OTA 245 **F**
Occupational Therapy Management (2-0) **2 Credits**
 This course will cover the roles and responsibilities in the administration of occupational therapy services. Topics include assistance with the management of departmental operations; the role of the Occupational Therapy Assistant (OTA) in OT, program evaluation; supervisory requirements; reimbursement issues; personnel training and supervision; continued learning; and job search skills. (Prerequisite: OTA 221, Co-requisite: OTA 240 and OTA 250)

OTA 250 **F**
Fieldwork Level II – B (0-12.5) **5 Credits**
 Students will complete level II fieldwork for 35-40 hours a week for eight weeks. This is required in a supervised fieldwork experience applying occupational theory, skills, and concepts at an off-campus designated site. Students will use the occupational therapy process while developing and practicing the skills of an entry-level Occupational Therapy Assistant. Students are assigned to a particular setting working with individuals with developmental, physical, or emotional challenges. This course is designed to provide the student the opportunity to apply learned theory, skills, and knowledge in a second setting, therefore, gaining a deeper and broader perspective of the field of Occupational Therapy. A course fee will apply. (Prerequisite: OTA 240)

PHARMACY TECHNICIAN

PHAR 101 **S**
Pharmacy Techniques I (3-0) **3 Credits**
 Upon completion of this course the student will possess the minimum knowledge base or competency to assist pharmacists in the preparation of prescriptions. A course fee will apply. (Prerequisites: HS Diploma or high school equivalency. Eligible to register to take a National certification exam)

PHAR 102 **S**
Pharmacy Techniques II (3-0) **3 Credits**
 Upon completion of this course the student will possess the knowledge base or competency to assist pharmacists in the preparation of prescriptions. The student will meet all the requirements to take a National certification exam. A course fee will apply. (Prerequisites: PHAR 101)

PHAR 110 **S**
Pharmacology Concepts (3-0) **3 Credits**
 Upon completion of this course the student will possess the knowledge base of competency to dispense medications. Ethical and legal concepts will be introduced. A course fee will apply.

PHAR 150 **S**
Pharmacy Tech Internship (1-4) **3 Credits**
 Supervised work experience allows the student to apply skills in an actual pharmacy situation. Students will be required to gain experience in the area in which they are seeking a certificate. Students will complete coursework and 56 hours of supervised work experiences during the semester. A course fee will apply. (Co-requisite: PHAR 102)

PHILOSOPHY

PHIL 101 **F,S**
Introduction to Western Philosophy (3-0) **3 Credits**
 A reading prerequisite is in recognition that good reading skills are necessary for this course. The course introduces students to the philosophical questions posed by western thinkers and the impact of these ideas on the wider culture and history, and will include readings taken from ancient Greeks to modern philosophers. The course partially fulfills requirements for humanities general education. (Prerequisite: Reading at least college level)

PHIL 121 **F,S**
World Religions (3-0) **3 Credits**
 Students survey and compare the great world religions emphasizing concepts of God, creation, humanity, scripture, ethics and salvation. Emphasis is placed on the relationship between religious beliefs and other elements of society and culture. This rational and historical analysis concentrates on Hinduism, Buddhism, Jainism, Sikhism, Confucianism, Taoism, Shinto, Zoroastrianism, Judaism, Christianity, Islam, and Baha'i. It also includes an introduction to some basic indigenous religions of Native America and Africa. This course partially fulfills requirements for humanities in general education.

PHIL 201
Logic (3-0) **3 Credits**
 The methods and principles used in distinguishing sound from faulty reasoning, both deductive and inductive, are examined. Students successfully completing this course practically fulfill Humanities general education requirements.

PHIL 202 **F,S**
Ethics (3-0) **3 Credits**
 PHIL 202 surveys various ethical systems and explores personal moral attitudes and the ethical struggles in modern society. Students successfully completing this course partially fulfill Humanities general education requirements. (Prerequisite: Reading at least at college level)

PHYSICAL EDUCATION

The following are physical education activity courses.

PE 103 **Upon Request**
Bowling (0-2) **1 Credit**

A brief history of bowling is followed by fundamentals of scoring. Instruction will be given in correct grips, stance, footwork and basic approach and release. (Additional bowling alley fee assessed)

PE 105 **F,S**
Weight Training (0-2) **1 Credit**
 This course is designed to assist participating students in maintaining and improving their general physical conditioning. The class emphasizes cardiovascular and muscular endurance, strength and flexibility through conditioning exercises and body mechanics. Daily activities include jogging and weight lifting to present a well-rounded program to students.

PE 110 **Upon Request**
Golf (0-2) **1 Credit**
 A brief history is followed by practice in the fundamental skills of golf. Scoring, strategy and rules are also taught. College facilities and the local golf course are utilized. (Additional golf fee may be assessed)

PE 111 **Upon Request**
Lifetime Activities (0-2) **1 Credit**
 This course acquaints students with a wide variety of activities that can be enjoyed throughout their lifetime. The following individual and group lifetime activities are covered: walking, bowling, badminton, volleyball, whiffle ball, table tennis, pickle ball and Frisbee. A course fee may apply.

PE 113 **F,S**
Lifetime Fitness and Wellness (1-1) **2 Credits**
 This course provides contemporary information about the beneficial effects of a positive healthy lifestyle and how to implement and live such a lifestyle through lecture, lab work, and weight workouts. General topics covered include cardiovascular fitness, posture, flexibility, agility, muscle tone, strength, endurance, diet and exercise. A course fee may apply.

PE 114 **Upon Request**
Badminton and Table Tennis (0-2) **1 Credit**
 A brief history of each activity is followed by practice in the fundamental skills of badminton and table tennis. Scoring, strategy and rules are also taught.

PE 117 **Upon Request**
Walking for Fitness (0-2) **1 Credit**
 Walking for Fitness is a low impact, outdoor activity class. It is designed to guide students toward better physical fitness through structured walking activities. The course will cover health-related topics such as heart rate (resting and target), weight management, pedometer usage, flexibility, caloric requirements and expenditures, body composition, stretching, and basic nutrition. (Course location varies)

PE 121/122 **F,S**
Strength Training for Athletes (0-2) **1 Credit**
 This course is designed to assist participating varsity athletes in maintaining and improving their general physical conditioning. The class emphasizes muscular strength and endurance training through conditioning exercises and body mechanics. (Prerequisite: Must be a freshman varsity athlete at Crowder)

PE 144 **F,S**
Introduction to Tae Kwon Do (0-2) **1 Credit**
 This course is the introduction to the history, discipline, skills and training involved in the study and practice of Tae Kwon Do.

PE 145 **F,S**
Beginning Tae Kwon Do (0-2) **1 Credit**
 This course is the continuation of the series of courses in Tae Kwon Do and provides the opportunity for continued growth and advancement in the art. (Prerequisite: PE 144)

PE 205 **F,S**
Advanced Weight Training (0-2) **1 Credit**
 This course is designed to assist participating students in maintaining and improving their general physical conditioning. The class emphasizes cardiovascular and muscular endurance, strength and flexibility through conditioning exercises and body mechanics. Daily

activities include jogging and weight lifting to present a well-rounded program to students. (Prerequisite: PE 105)

PE 221/222 **F, S**
Strength Training for Athletes (1-0) **1 Credit**
 This course is designed to assist participating varsity athletes in maintaining and improving their general physical conditioning. The class emphasizes muscular strength and endurance training through conditioning exercises and body mechanics. (Prerequisite: Must be a sophomore varsity athlete at Crowder)

PE 244 **F, S**
Intermediate Tae Kwon Do (0-2) **1 Credit**
 This course is the continuation of the series of courses in Tae Kwon Do and provides the opportunity for continued growth and advancement in the art. (Prerequisite: PE 145)

PE 245 **F, S**
Advanced Tae Kwon Do (0-2) **1 Credit**
 This course is the continuation of the series of courses in Tae Kwon Do and provides the opportunity for continued growth and advancement in the art. (Prerequisite: PE 244)

The following are physical education lecture courses.

PE 115 **F**
First Aid (2-0) **2 Credits**
 This course will teach students how to give immediate care to a person who has been injured or suddenly taken ill. The course includes self-help and home care if medical assistance is unavailable or is delayed.

PE 120 **F**
Introduction to Health, Physical Education & Recreation (2-0) **2 Credits**
 This course is to acquaint students with the principles, objectives, methods, subject matter and career materials in Physical Education.

PE 125 **S**
Athletic Training (2-0) **2 Credits**
 Instruction is given in the prevention and care of athletic injuries, including taping, exercise and other training techniques.

PE 142 **F, S**
Personal and Community Health (3-0) **3 Credits**
 This course acquaints students with a variety of topics including emotional health, drugs and drug abuse, human sexuality, the care and prevention of common diseases, body systems, analysis of health problems and proper nutrition.

PE 150 **F**
Psychological Aspects of Physical Activity and Sports (2-0) **2 Credits**
 This course will teach students the value of physical activities and sports in society through the development of the following personal characteristics: learning how to participate in sports anxiety-free, learning how to reach peak performance, learning how to maintain consistent quality performance, and learning how to win and lose.

PE 160 **Upon Request**
Coaching Methods I (Basketball) (2-0) **2 Credits**
 The various facets of organizing and managing a school basketball program are taught. Areas of concentration involve systems of offense and defense, special game situations, organizing practices and teaching fundamental skills of the game.

PE 206, 207 **F, S**
Physical Education for Athletes (Men) **1 Credit**
 This class is designed for varsity participation and preparation in soccer. This class is for *sophomores only*. PE 206 must be taken in the fall semester followed by PE 207 in the spring semester.

PE 260 **S**
Coaching Methods II (Baseball/Softball) (2-0) **2 Credits**
 The study of school baseball/softball program organization and

management through basic concepts of individual and team offense and defense are taught. Game situations, organization, practices, and fundamental skills are covered.

PE 197 **Upon Request**
Topics in Physical Education **1 Credit**
 This is a variable content course with topics that can change from semester to semester. Topics will be chosen each semester depending upon student requests and needs, and will be published in the schedule of classes. Topics may include but are not limited to: modern dance, swimming, outdoor education, basketball, tennis, racquetball, soccer, soft aerobics, etc. The course may be repeated if the topic is different.

PHYSICS AND PHYSICAL SCIENCE

PHYS 101 **F, S**
Survey of Physical Science (3-2) **4 Credits**
 The basic principles and interrelations between physics, chemistry, earth science and astronomy are examined in this class. The course satisfies part of the general education science requirement for the Associate in Arts degree.

PHYS 102 **F, S**
Physical Science Essentials (3-0) **3 Credits**
 The basic principles and interrelations between physics, chemistry, earth science and astronomy are examined in this class. The course satisfies part of the general education science requirement for the Associate in Arts degree.

PHYS 105 **F, S**
Descriptive Astronomy (3-0) **3 Credits**
 This is an introductory lecture course in astronomy. Topics include the history of Astronomy, the Moon, the Sun, the Solar System, Gravity and planetary motion, stellar evolution, neutron stars, black holes, galaxies and the evolution of the Universe. The course satisfies part of the general education science requirements for the Associate in Arts degree.

PHYS 190 **S**
General Physics I (4-2) **5 Credits**
 General Physics I is a calculus level course that examines the principles and applications of classical mechanics and thermodynamics. This class is intended for students majoring in engineering, the physical sciences, mathematics and computer science. (Prerequisites: MATH 150) (Co-requisite: MATH 160 or one-semester MATH 150/160 sequence concurrently with PHYS 190)

PHYS 210 **F**
General Physics II (4-2) **5 Credits**
 General Physics II continues study initiated in Physics 190. The topics covered are electricity and magnetism, optics and elements of modern physics. This course is intended for students majoring in engineering, the physical sciences, mathematics and computer science. (Prerequisite: PHYS 190, MATH 150, and MATH 160)

PHYS 250 **S**
Statics (3-0) **3 Credits**
 Statics is a course for engineering majors that examines two and three-dimensional mechanical systems under equilibrium conditions. (Prerequisites: PHYS 190, MATH 150, and MATH 160)

PHYS 271, 272, 273
Topics in Physics **1-3 Credits**
 A variable content course with areas of study that reflects current issues. Topics are identified in the course schedule and prerequisites are spelled out in the syllabus. (Prerequisite: Permission of department)

POLITICAL SCIENCE

PLSC 103 **F, S** **National, State, Local Government (3-0)** **3 Credits**

PLSC 103 introduces the basic principles and structures of the American national government, and state and local government organizations and functions. Emphasis is placed on constitutional development and interpretation; the place of government in the social process; and the function of the executive, legislative, and judicial branches. Students successfully completing this course fulfill the Civics requirement in constitutional study within the Social and Behavioral Science general education requirements. (Prerequisite: Reading at least at college level)

PLSC 104 **F** **National, State, Local Government Honors (3-0)** **3 Credits**

This is a political science class designed for honors students. The course content is the same as Political Science 103 except this class is writing intensive and, when appropriate, more varied instructional techniques will be used in this class. Students successfully completing this course fulfill the Civics requirement in constitutional study within the Social and Behavioral Science general education requirements. (Prerequisite: admission to Honors Program or consent of the instructor and reading at the college level)

PLSC 111, 112, 113 **Upon Request** **Topics in Political Science (1-3)** **1-3 Credits**

These courses provide an opportunity to study selected Political Science topics not covered in the Political Science curriculum or to study in greater depth, topics addressed in introductory Political Science courses. The content of these courses may vary from semester to semester and some may require a prerequisite. Check with the Division Chair, instructor or advisor regarding prerequisites for a specific topics course. These courses will transfer but may or may not meet specific degree or program requirements at other institutions (Prerequisite: Reading at least at college level)

PRESCHOOL TEACHER/ PARAPROFESSIONAL

ECD 101 **F** **Foundations and Theories in Early Childhood Education** **(3-0)** **3 Credits**

This course is an introduction to early childhood education including a historical perspective of early childhood education, relating to parents and other professionals in the community, and advocating for children and families. (Prerequisite: Reading at least at college level)

ECD 103 **F** **Health, Safety, & Nutrition of Young Children (3-0)** **3 Credits**

This course covers a review of health/safety practices recommended for childcare and includes information on common diseases and health problems. Guidelines and information nutrition and developmentally appropriate activities are also studied in the course. (Prerequisite: Reading at least at college level. Successfully complete first aid and CPR certification for adult, child and infant by the end of the semester)

ECD 201 **S** **Curriculum for Early Childhood Programs (3-0)** **3 Credits**

The goals of this course are to introduce students to the appreciation and assessment of young children's thinking, to provide opportunities to develop competencies in promoting the learning and overall development of young children individually as well as in groups, and to increase levels of professionalism as educators. (Prerequisite: Reading at least at college level; ECD 101 and ECD 103 or current CDA)

ECD 203 **S** **Early Childhood Practicum (2-0)** **2 Credits**

By actively participating in the care and education of young children in an early childhood program, students will become more proficient in administrative skills, increase their awareness of contemporary issues in early childhood, and will demonstrate a high level of competence as a head teacher. Students will serve a total of 45 hours in field experience and 16 hours in seminar during the semester. (Prerequisite: Reading at least at college level and provide

a current copy of the cleared background check. Concurrent enrollment in ECD 201 is expected)

PSYCHOLOGY

PSYC 101 **F, S, SU** **General Psychology (3-0)** **3 Credits**

An introduction to the scientific study of human behavior including motivation, perception, learning, emotions, intelligence and the physiological basis of behavior is presented. Successful completion of this course partially fulfills Social and Behavioral Science general education requirements.

PSYC 110 **F** **Psychology of Personal Adjustment (3-0)** **3 Credits**

This study of the development of the self and problems of adjustment emphasizes effective methods of coping with stress and improving interpersonal relationships through discussion, research and group dynamics. Successful completion of this course partially fulfills Social and Behavioral Science general education requirements. (Prerequisite: PSYC 101, Reading at least at college level)

PSYC 203 **F, S** **Autism Spectrum Disorders (3-0)** **3 Credits**

This course focuses on a broad overview of autism, Asperger's syndrome and related autism spectrum disorders with particular emphasis on characteristics, definition, educational aspects, and contemporary issues in the field of special education. It is designed to provide students with a firm grounding in the foundations of teaching persons with autism and expose them to recent developments in the field. Content also includes methods to enhance classroom functioning and skill acquisition.

PSYC 204 **F** **Applied Behavior Analysis for Educators (3-0)** **3 Credits**

This course focuses on identifying, recording, evaluating, and changing social and academic behaviors of special and diverse populations. Theories of classroom management will be explored and various approaches to management including use of technological advances will be addressed. Developing classroom and individual behavior management plans will be emphasized.

PSYC 211 **F, S, SU** **Lifespan Development (3-0)** **3 Credits**

This is a study of human development across the lifespan. From conception to death, this course will examine physical, cognitive, and socioemotional changes along developmental milestones. Successful completion of this course partially fulfills Social and Behavioral Science general education requirements. (Prerequisite: PSYC 101)

PSYC 213 **F, S** **Abnormal Psychology (3-0)** **3 Credits**

This course is an introduction to psychopathology, the scientific study of mental disorders. This course surveys the number of disorders including anxiety disorders, mood disorders, eating disorders, substance use disorders, schizophrenia, and personality disorders. It will cover basic concepts, definitions, historical perspectives, and theories.

PSYC 290 **S** **Clinical I-Supervised Field Experience (3-0)** **3 Credits**

This course will provide students the experience of practicing applied behavior analysis methodologies. Students will learn discrete trial teaching, natural environment teaching, incidental teaching, and how to conduct functional behavior assessments. Students will develop and implement behavior intervention plans, monitoring behavior intervention plans and make informed decisions when working with a child with autism or has behavioral issues. This course requires 80 hours of on-site work and a portfolio is required to successfully complete this course.

Educational Psychology (See EDUC 231)

SOCIAL WORK

SWK 200

Introduction to Social Work (3-0)

F,S

3 Credits

Social work methods and processes, case work, group work, community organization, research and social action are examined. Theory and application of social work as a way of understanding and helping people are also discussed. (Prerequisite: Reading at least at college level)

SWK 221

Basic Helping Skills (3-0)

S

3 Credits

This course combines the theories of social work practice with social work practice skills using common models and theoretical frameworks. It presents and provides structured practice of fundamental interpersonal skills required for effective social work practice. This class teaches interviewing skills and critical thinking about the interview processes beginning with intake and ending with termination and evaluation. The models, theories, and processes learned in this course serve as the foundation for generalist practice with individuals, families, groups, and communities. Students will also be required to volunteer at different service agencies for a specific amount of service hours to complete the course.

SWK 230

Substance Abuse Interventions (3-0)

F

3 Credits

The objective of the Substance Abuse Interventions class is to introduce students to the general field and study of chemical abuse and dependency. Areas of study broadly include definitions, prevalence, etiology, policies, effects on family and society, and prevention and treatment approaches. SWK 230 will examine each of the major topic areas, theories and major findings that comprise this area of human behavior.

SOCIOLOGY

SOC 101

General Sociology (3-0)

F,S

3 Credits

This introduction analyzes groups, institutions and individual behavior in group environments. Successful completion of this course partially fulfills Social and Behavioral Science general education requirements.

SPEECH

COMM 104

Fundamentals of Speech (3-0)

F,S,SU

3 Credits

Fundamentals of Speech is an introduction to the fundamentals of effective public speaking and listening. The course is designed to develop confidence in self-expression and interpersonal communications. Communications 104 includes preparing, organizing and delivering oral messages within a variety of real life situations of communication. Audience analysis, the listening process and clarity of expression are emphasized. (Prerequisite: ELI 35, if required by Crowder College's standard Admission testing procedures)

SPCH 121, 122, 123, 124

Competitive Speech

1 Credit

Designed for students interested in improving communicative and public speaking skills through the practical application of competitive speech and debate. This class covers speech research, preparation, outlining, and delivery. Provides students with practical experience in both practice rounds and intercollegiate competitions.

SPCH 193

Topics (3-0)

3 Credits

Variable content, appropriate to student needs, is included in this elective course. Lectures and/or studio projects in the fields of speech and debate may be used. (Consult the registration schedule for specific topics when class is offered)

THEATRE

Note: Only four hours of Theatre Practicum (Performance or Technical, not four hours of each) may be applied toward graduation.

TA 105

Acting I (3-0)

F

3 Credits

This course is designed to free the body and voice as well as the imagination and creativity of the student. This course's purpose is to allow the student to become free from inhibitions when performing on stage. A series of exercises will be utilized to accomplish these goals as well as monologue and scene work to polish the skills of the actor.

TA 106, 107, 206, 207

Theatre Practicum, Performance (1-0)

F,S,SU

1 Credit

Students cast in departmental production(s) may receive credit for their participation as actors. A minimum of 30 hours in rehearsal, performance and strike is required. This course may be repeated for credit with four hours to be applied toward graduation. (Prerequisite: permission of instructor)

TA 108

Playwriting (3-0)

F

3 Credits

This course is designed to introduce students to the fundamentals of script writing for stage and screen. Participants in this class will learn to properly compose and format scripts, while also exploring the freedom of creative expression through writing. Throughout the semester we will explore the three act structure, read various literary works and apply technique through various written and performance projects.

TA 112

Directing I (3-0)

S

3 Credits

This course is designed to introduce students to the fundamentals of directing. Participants in this class will learn how to execute the art and responsibilities of directing; from casting to strike. This course will provide students with a hands-on approach to directing, while also encouraging them to engage in play analysis, critical thinking and creative application.

TA 115

Stagecraft (3-0)

S

3 Credits

Students study backstage work through an examination of the materials, techniques and conventions of stage construction and show production. The course will introduce the practical aspects of properties, scenery, painting, lighting, sound, electronics, and drafting. Thirty (30) hours of practical experience are required during the semester.

TA 116, 117, 216, 217

Theatre Practicum, Technical (0-3)

F,S,SU

1 Credit

Students may receive credit for their participation in technical aspects of departmental productions when not currently participating for credit in another theatre course. A minimum of thirty (30) hours of theatre participation is required in lighting/sound, scenery construction, costumes, props, stage management, or any combination. This course may be repeated for credit for a maximum of four hours applied toward graduation. (Prerequisite: permission of instructor)

TA 125, 225

Summer Theatre (3-0)

SU

3 Credits

Students serve as active members of the Crowder Summer Theatre Company. They serve as actors, designers and technicians in each summer theatre production. Thirty (30) hours of practical experience are required during the semester.

TA 180

Stage Makeup (3-0)

F

3 Credits

Basic techniques in design and application of stage makeup are presented as well as proper care and sanitation of all materials. Students learn materials and methods as well as fundamental theory for the development of dramatic characters through stage makeup.

TA 205

Introduction to Theatre (3-0)

F,S,SU

3 Credits

Theatre organization, stage technique and representative plays from Greek to modern drama are introduced. Emphasis is placed on the theatre as a living art form. This course partially fulfills general education humanities requirements.

TA 208 **S**
Scene Work (3-0) **3 Credits**
 This course is designed to free the body and voice as well as the imagination and creativity of the student. This course's purpose is to allow the student to become free from inhibitions both on stage and in life. A series of exercises will be utilized to accomplish these goals as well as monologue and scene work to polish the skills of the actor. (Prerequisite: TA 205 or Instructor approval)

TA 150, 151, 152, 250, 251, 252 **SDL, Upon Request**
Topics in Theatre (1-4) **1-4 Credits**
 A variable content course with topics that can change from semester to semester focusing on areas of theatre not offered in the general theatre curriculum. Topics are identified by title in the class schedule. This course may be repeated if the topic is different.

TRUCK DRIVING

TRDR 101, 102
Transport Training (13-0) **13 Credits**
 This course offers the student entry-level knowledge and skills necessary to operate a tractor-trailer vehicle safely, efficiently and economically. The students' training will consist of various techniques of instruction including classroom training, driving on a controlled paved range, backing range, as well as highway and city driving. The tractor-trailers used in training students are comparable to what is used by the trucking industry today.

VETERINARY TECHNOLOGY

ANSC 180 **F, S**
Introduction to Veterinary Science (2-0) **2 Credits**
 This course will begin with a brief study of the professions of veterinary medicine. Basic cell structure, tissue types, and body systems will then be covered, with practical application to common animal diseases. Animal hospital procedures and animal handling will be introduced. This course will serve as preparation for those interested in working in veterinary medicine or having an interest in application to the Veterinary Technology program at Crowder College or to a college of veterinary medicine to pursue a doctorate degree. (Taking BIOL 101 or BIOL 110 prior to or at the same time as taking this course is recommended.)

VETC 110 **F**
Sanitation and Animal Care (2-0) **2 Credits**
 As an introduction to sanitation, disinfectants, sterilization, and zoonotic diseases and how they relate to public health, this course includes parasitology, cleaning and sterilization sanitation of equipment and facilities, and procedures in patient care. Anti-infective drugs are introduced. Material Safety Data Sheets and OSHA regulations are also discussed. (Prerequisite: Admittance to the Veterinary Technology program)

VETC 120 **S**
Veterinary Hospital Technology I (1.5-3) **3 Credits**
 As an introduction to anesthetics and surgical assisting, the course includes surgical preparations, monitoring, and post-operative procedures, parenteral fluid administration and intravenous hookups. Drugs affecting the nervous and cardiovascular systems are discussed, along with the basics of pharmacology. A course fee will apply. (Prerequisite: Admittance to the Veterinary Technology program)

VETC 130 **S**
Clinical Pathology Techniques I (1.5-3) **3 Credits**
 This course is an introduction to laboratory procedures including clinical chemistries, hematocrits, complete blood counts, differentials, and urinalysis. A course fee will apply. (Prerequisite: Admittance to the Veterinary Technology program)

VETC 140 **F**
Companion Animal Technology (2-2) **3 Credits**
 In addition to instruction in restraint and handling of dogs, cats, this course also includes the study of common canine and feline diseases, small animal parasites, medical terminology, identification of breeds, discussion of commonly used medications, bathing and basic grooming techniques, blood collection, specimen collection, and common laboratory techniques. A course fee will apply.

(Prerequisite: Admittance to the Veterinary Technology program)

VETC 180 **F**
Anatomy and Physiology of Animals (2-4) **4 Credits**
 This course includes basic principles of anatomy using a systemic and comparative approach, as well as instruction in physiology as it relates to anatomy and applicable pathology. Instruction in anatomic landmarks, interrelationships, and terminology is essential to this course. A course fee will apply. (Prerequisite: Admittance to the Veterinary Technology program)

VETC 220 **F**
Veterinary Hospital Technology II (1.5-3) **3 Credits**
 This course includes administration of anesthetics, surgical assisting and patient monitoring, bandaging, casting, blood transfusions, variations in surgical preparations, and postoperative care. Emergency treatments will be discussed in greater detail. Pharmacology of various classes of drugs will also be included. A course fee will apply. (Prerequisite: Admittance to the Veterinary Technology program)

VETC 230 **S**
Laboratory Animal and Avian Technology (1-2) **2 Credits**
 Students will study basic anatomy and diseases of laboratory animals and birds, as well as develop skills in handling, performing laboratory testing, and treatment of these species. Handling and diseases of some exotic/other species will be discussed. A course fee will apply. (Prerequisite: Admittance to the Veterinary Technology program)

VETC 250 **S**
Clinical Pathology Techniques II (1.5-3) **3 Credits**
 This course includes the theory and performance in hematology, urinalysis, and cytology with the introduction to simple immunologic tests, blood coagulation tests and bone marrow evaluation. Collection and identification of fungal pathogens are performed. A course fee will apply. (Prerequisite: Admittance to the Veterinary Technology program)

VETC 263 **S**
Large Animal Med/Surg (1.5-3) **3 Credits**
 This course emphasizes techniques necessary to assist the veterinarian in a large animal or mixed practice and in research facilities. Bovine, equine, porcine, ovine, and caprine medicine and management including restraint, blood collection, medicating, and nursing techniques are included. A course fee will apply. (Prerequisite: Admittance to the Veterinary Technology program)

VETC 270 **S**
Board Examination Review (1-0) **1 Credit**
 Students will systematically review all course material covered in previous semesters to aid in preparation for the national and state board examinations, improving the understanding of all program materials. A course fee will apply. (Prerequisite: Admittance to the Veterinary Technology program)

VETC 280 **F**
Radiology and Electronic Procedures (1-2) **2 Credits**
 This course is a study and practice in radiological techniques, radiographic exposure techniques, film processing, contrast radiography, as well as ultra sound technology. A course fee will apply. (Prerequisite: Admittance to the Veterinary Technology program)

VETC 284 **SU**
Veterinary Technician Internship (0-4) **4 Credits**
 This course consists of 240 hours in which the student works for a professional veterinary institution. The student will apply his or her training in an occupational setting, applying previously learned skills and knowledge to the work place. Evaluation forms are completed by the cooperating establishment. This course is offered for P/F grade only. (Prerequisite: Admittance to the Veterinary Technology program)

VETC 285 **S**
Vet Tech Clinical Experience I (0-2.5) **1 Credit**
 This course consists of 40 hours in which the student works with a veterinarian in a clinical setting as a first or second year vet tech

student. The student will apply previously learned skills and knowledge to the work place. At the end of the experience, the student will write a paper discussing the pros and cons of this experience. Evaluation forms will also be completed by the supervising veterinarian. This course is offered for a pass/fail grade only.

VETC 286 **F,S**
Vet Tech Clinical Experience II (0-2.5) **1 Credit**

This course consists of 40 hours in which the student works with a veterinarian in a clinical setting as a second year vet tech student. The student will apply previously learned skills and knowledge to the work place. At the end of the experience, the student will write a paper discussing the pros and cons of this experience. Evaluation forms will also be completed by the supervising veterinarian. This course is offered for a pass/fail grade only.

WELDING

WELD 113 **F,S**
Introduction to Welding (2-2) **3 Credits**

This course is designed to introduce the student to the basic operation of Shielded Metal Arc Welding ("Stick" Welding), Gas Metal Arc Welding (formerly M.I.G. Welding), Gas Tungsten Arc Welding (formerly T.I.G. Welding) and Thermal Cutting. Fee for materials and supplies. A course fee will apply.

WELD 117 **F**
Welding Blueprint Reading (2-1) **2 Credits**

This course is the basic blue printing interpretation including the principles of reading, engineering drawings, and symbol used to understand prints in sufficient detail to give students the working knowledge of the subject. Instruction is based on a combination of traditional lecture/classroom exercises coupled with hands-on shop activities. A course fee will apply.

WELD 124 **F**
Fabrication Methods I (2-1) **2 Credits**

This course instructs students on fabrication techniques as they relate to product manufacturing, maintenance and repair. Students will learn how to use basic shop tools and shop equipment efficiently and safely. A course fee will apply.

WELD 136 **F,S**
Metallurgy Concepts (2-1) **2 Credits**

This course will study the basic fundamentals of metallurgy. We will discuss the behavior of metals and how they relate to the field of welding. Topics include identification, classification and properties of ferrous metals, nonferrous metals, alloys, heat treatment, destructive and non-destructive tests, cast iron and plastics.

WELD 140 **F**
Fabrication Methods II (2-1) **2 Credits**

This is an advanced course for students to learn fabrication techniques as they relate to product manufacturing, maintenance and repair. Students will learn how to use advanced shop tools and shop equipment efficiently and safely. Notes and handouts from instructor will be handed out along with production prints for making class projects. A course fee will apply. (Prerequisite: WELD 124)

WELD 151 **F,S**
Welding Theory I (2-1) **2 Credits**

This theory course introduces the processes of, Gas Tungsten ARC Welding (GTAW), Shielded Metal ARC Welding (SMAW), Gas Metal ARC Welding (GMAW), and Oxy-Fuel Cutting (OFC). Safety for students such as Personal Protection Equipment (PPE) and safe welding practices in the welding shop emphasized. Welding and cutting equipment, selection of welding supplies and Materials that are used in industry are introduced. A course fee will apply. (Co-requisites: WELD 153)

WELD 152 **F,S**
Welding Theory II (2-1) **2 Credits**

This theory course focuses on advanced lessons in Gas Metal Arc Welding, Gas Tungsten Arc Welding, Shielded Metal Arc Welding, and Oxy-Fuel Cutting. Flux Core Arc Welding and Plasma Arc Cutting are also introduced. The course will also study welding symbols, drawings, nonferrous welding applications, welding codes,

specifications and tests with special emphasis on The American Welding Society (AWS) welder qualifications. A course fee will apply. (Prerequisite: WELD 151; Co-requisites: WELD 154)

WELD 153 **5 Credits**
Fillet Plate Lab (0-10)

This course gives beginning instructions in laboratory safety, use of Personal Protection Equipment (PPE), with a strong emphasis on the safe handling of welding and cutting equipment. Basic hands-on instruction in Gas Tungsten Arc Welding (GTAW), Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Oxy-Fuel Cutting (OFC) on various thicknesses of metal, and the techniques used. Also covered are welding supplies and equipment maintenance. A course fee will apply. (Co-requisites: WELD 151)

WELD 154 **5 Credits**
Groove Plate Lab (0-10)

Instruction will consist of perfecting skilled welding on plate steel in all positions using Shield Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Gas Tungsten Arc Welding (GTAW), Flux-Core Arc Welding (FCAW) and Carbon Arc Cutting-Air (CAC-A). Students will practice and weld plates in accordance to The American Welding Society (AWS) certification guidelines. This course will also have planned industry Field trips, Welding Competitions State and local, and Career Fairs when scheduled. A course fee will apply. (Prerequisite: WELD 153; Co-requisites: WELD 152)

WELD 160 **F,S**
Plate Methods I (2-11) **7 Credits**

This course emphasizes occupational safety training and includes OSHA 10 certification. The course has a strong focus on workplace safety, use of Personal Protective Equipment (PPE) and an emphasis on the safe handling of welding and cutting equipment. This course gives basic hands-on instruction in the processes of Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), and Thermal Cutting. Students will learn to identify and use welding-related hand tools. Students will weld on various thicknesses of metal and use a variety of techniques. Topics covered also include how to manage welding supplies, welding consumables, and maintain equipment.

WELD 165 **F,S**
Plate Methods I (2-11) **7 Credits**

This course focuses on advanced lessons in Shield Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Flux Core Arc Welding (FCAW), Gas Tungsten Arc Welding (GTAW), and Thermal Cutting. Instruction will consist of perfecting skilled welding on plate steel in all positions using variety of common industry recognized welding processes. Welds will be performed on fillet and groove joint design. Students will also study welding symbols, drawings, welding codes, specifications and tests with special emphasis on the American Welding Society (AWS) welder qualifications. Students will practice performing welds in accordance to the American Welding Society (AWS) certification guidelines. At the end of this course, students have the opportunity to certify to one of five specific AWS certifications. (Prerequisite: WELD 160)

WELD 197, 198, 199, 297, 298, 299 **1-3 Credits**
Topics in Welding Technology (0-8 to 3-0)

This is a variable content course with areas of study that reflect current needs of individual students in the area of Welding Technology. Topics are identified in the course description. Fee for materials and supplies. A course fee may apply. (Prerequisite: Permission of instructor)

WELD 201 **2 Credits**
Welding Theory III (2-1)

This course will provide the student with technical understanding in advanced welding theory which includes the study of electricity for the different welding and cutting processes. It will provide the student with a theoretical understanding of welding and cutting processes when using mechanical and computer controlled (CNC) equipment. It will also provide the student with theory for writing Numerical Control (NC) programming. The course will also provide the student with theory on metallurgy pertaining to welding and cutting. A student portfolio will be designed. A course fee will apply. (Prerequisite: WELD 152; Co-requisites: WELD 211)

WELD 202 **S**
Welding Theory IV (2-0) **2 Credits**

This course provides theory to develop welding skills necessary to make certified welds according to the American Welding Society (AWS), American Society of Mechanical Engineers (ASME), or American Petroleum Institute (API) Codes. Weld-ability of ferrous and non-ferrous metals, metal identification, nondestructive and destructive testing, industrial safety, and OSHA regulations will be covered. This course will also provide the student with a technical understanding of weld procedures and the advanced operation of welding equipment including robotic applications. The student will learn various advanced welding certification and inspection applications which include what it takes to become a Certified Welding Inspector and a CWI's inspection duties. A course fee will apply. (Prerequisites: WELD 201; Co-requisites: WELD 213/216)

WELD 211 **7 Credits**
Pipe Groove Lab (0-14)

This course provides the student an opportunity to learn various advanced welding applications which include Gas Metal Arc Welding (GMAW), and Shielded Metal Arc Welding (SMAW) and Gas Tungsten Arc Welding (GTAW). The student will also learn a technical understanding of machine control cutting and robotic welding operations which include Numerical Control (NC) programming and teach pendant control. This course will also provide the student with a technical understanding of tacking and welding techniques for completing projects to reflect industry standards. A course fee will apply. (Prerequisites: WELD 154; Co-requisites: WELD 201)

WELD 213 **4 Credits**
Advanced Pipe Groove Lab (0-8)

This course provides the student an opportunity to learn various advanced welding applications which include Gas Metal Arc Welding-Pulse (GMAW-P), Flux Cored Arc Welding (FCAW), Gas Tungsten Arc Welding (GTAW) and Shielded Metal Arc Welding (SMAW). The student will also learn a technical understanding of advanced cutting operations including Numerical Control (NC) programming. The student will also learn advanced CNC and robotic controls to correctly operate fabrication equipment. This course will also provide the student with a technical understanding of calculating material and use of proper procedures for the completion of projects manufactured in the lab. A course fee will apply. (Prerequisites: WELD 211; Co-requisites: WELD 124 and WELD 140)

WELD 216 **4 Credits**
Pipe and Plate Fabrication Lab (0-8)

This course provides the student an opportunity to learn various advanced welding applications for pipe welding which include SMAW, GTAW and GMAW. The student will also learn codes and certifications from various national welding standards including an unlimited thickness certification. This course will also provide the student with a technical understanding of calculating material and use of proper procedures for the completion of pipe weldments. A course fee will apply. (Prerequisites: WELD 211; Co-requisites: WELD 202)

WELD 270 **F,S**
Pipe Methods I (2-14) **8 Credits**

This course will provide the student with technical understanding in pipe welding, which includes the study of electrical theory for the different welding and cutting processes. Students will be welding various thicknesses of pipe on the 1G, 2G, 5G, and 6G positions. Students will increase technical understanding of tacking and welding techniques required by industry standards. Students will continue to utilize welding applications which include Shielded Metal Arc Welding (SMAW), Gas Tungsten Arc Welding (GTAW), and Flux Core Arc Welding (FCAW). (Prerequisites: WELD 165)

WELD 275 **F,S**
Pipe Methods II (2-14) **8 Credits**

This course provides the student with an opportunity to learn various advanced welding applications for pipe welding which includes the SMAW, GTAW and FCAW processes. The course provides students the opportunity to further develop their welding skills necessary to make certified welds in accordance with the American Welding Society (AWS) D1.1 and American Society of Mechanical Engineers (ASME) Section 1X. Per AWS D1.1 and ASME Section IX, nondestructive and destructive testing methods will be reviewed and

implemented. This course will also provide the student with a technical understanding of a WPS (Welder Performance Specification) and a PQR (Performance Qualification Record). This course will also provide the student with a technical understanding of proper procedures for the completion of pipe weldments. (Prerequisite: WELD 270)

WELD 280 **F,S**
Pipe Methods II (2-5) **5 Credits**

This course instructs students on fabrication techniques as they relate to manufacturing, maintenance, and repair. Fabrication processes may include thermal cutting, Gas Metal Arc Welding-Pulse (GMAW-P), Flux Cored Arc Welding (FCAW), Gas Tungsten Arc Welding (GTAW) and Shielded Metal Arc Welding (SMAW). Students will learn how to use basic shop tools and shop equipment efficiently and safely. Students will interpret and use the type of engineering drawings and prints found in the welding trade and calculate material needs based on those drawings. (Prerequisite: WELD 165)

WELD 285 **F,S**
Fabrication Methods II (2-5) **5 Credits**

This course provides the students an opportunity to learn various advanced welding applications which include thermal cutting, Gas Metal Arc Welding-Pulse (GMAW-P), Flux Cored Arc Welding (FCAW), Gas Tungsten Arc Welding (GTAW) and Shielded Metal Arc Welding (SMAW). The student will also learn a technical understanding of advanced cutting operations including Computer Numerical Control (CNC) programming. The student will also learn advanced CNC to correctly operate fabrication equipment. This course will also provide the student with a technical understanding of calculating material and use of proper procedures for the completion of projects manufactured in the lab. (Prerequisite: WELD 280)

Advanced Manufacturing Technology: Programmable Logic Controller (PLC) Technician Certificate

Advanced Manufacturing Technology: Automation/Robotics Technician Certificate

Advanced Manufacturing Technology: Automation/Robotics Option AAS

The Advanced Manufacturing Technology program prepares students for employment in industries with automated manufacturing processes. The program is built around a set of core courses designed to give students the basic skill set required for this industry coupled with specialty courses allowing students to focus on various related options. This Program of Study addresses the Automation/Robotics Option.

The Automation/Robotics Technician certificate prepares students for employment in industries with automated robotic processes. Successful graduates will possess the ability to perform entry level maintenance and repairs to industrial automated equipment and robots.

This certificate prepares students to enter a career in industrial technology with a basic skill set that will provide entry level knowledge of basic electricity, motor controls, and programmable logic controllers (PLC). The PLC classes will provide general and advanced training in programmable logic controllers as they are used in industry to manage multiple automated processes.

Program of Study

PLC Certificate Courses			16 hours
AMT	102	Introduction to Industrial Electricity (3)	
AMT	104*	Electrical Motor Controls (3)	
AMT	111	Introduction to Industrial Safety (1)	
AMT	142*	Manufacturing Mechanics (3)	
AMT	204*	Programmable Logic Controllers I (3)	
AMT	206*	Programmable Logic Controllers II (3)	
Auto/Robotics Certificate Courses			11 hours
AMT	132	Industrial Hydraulics (3)	
AMT	182*	Introduction to Automated Robotics (3)	
AMT	284*	Automated Robotic Programming (3)	
COLL	105	Technical Career Development I (1)	
COLL	106	Technical Career Development II (1)	
Auto/Robotics Mathematics			3 hours
MATH	104*	(3)	
MATH	135*	(3)	
Communications			9 hours
Written Communications (6 hours)			
ENGL	101*	(3)	
ENGL	102*	(3)	
ENGL	203*	(3)	
Oral Communications (3 hours)			
COMM	104*	(3)	
Civics			3 hours
HIST	106*, 107*	(3)	
PLSC	103*	(3)	
Support Courses			9 hours
BSAD	115	(3) – OR – BSAD 125	
DRFT	101	(3)	
WELD	113	(3)	
Advanced Manufacturing Courses			3 hours
AMT	290*	Manufacturing Internship (3)	
Automation/Robotics Courses			6 hours
AMT	162*	Industrial Process Control I (3)	
CNS	113	Intro to Networks (3)	
Required Online Course			0 hour
CVCS	101	Missouri Higher Ed Civics Examination	

Suggested Plan of Study

FIRST YEAR

Fall Semester		Hours
AMT	102 Intro to Industrial Electricity	3
AMT	104 Electrical Motor Control	3
AMT	111 Introduction to Industrial Safety	1
AMT	142 Manufacturing Mechanics	3
AMT	204 Programmable Logic Controllers I	3
AMT	206 Programmable Logic Controllers II	3
TOTAL		16

Graduate with PLC Certificate

Spring Semester		Hours
AMT	132 Industrial Hydraulics	3
AMT	182 Intro to Automated Robotics	3
AMT	284 Automated Robotic Programming	3
COLL	105 Technical Career Dev. I	1
COLL	106 Technical Career Dev. II	1
Approved Mathematics Course		3
TOTAL		14

Graduate with Automation/Robotics Certificate

SECOND YEAR

Fall Semester		Hours
AMT	162 Industrial Process Control	3
COMM	104 Fundamentals of Speech	3
DRFT	101 Intro to Engineering Drawing	3
WELD	113 Introduction to Welding	3
Approved Written Communications Course		3
TOTAL		15

Spring Semester		Hours
AMT	290 AMT Internship	3
CNS	113 Intro to Networks	3
BSAD	125 -OR- BSAD 115	3
Approved Civics Course		3
Approved Written Communications Course		3
TOTAL		15

Graduate with AAS

Total PLC CERTIFICATE Hours Required	16
Additional Hours Needed for AAS	14
Total A/R CERTIFICATE Hours Required	27
Additional Hours Needed for AAS	30
Total AAS Hours Required	60

Courses for Certificate	
Additional Courses for AAS Degree	



CERTIFICATE

Programmable Logic Controller (PLC) Technician

Students must earn 16 hours for this certificate.

Done Curr To do

Major Courses

16 hours

AMT	102 Introduction to Industrial Electricity (3)
AMT	104 Electrical Motor Controls* (3)
AMT	111 Introduction to Industrial Safety (1)
AMT	142 Manufacturing Mechanics (3)
AMT	204 Programmable Controllers I* (3)
AMT	206 Programmable Controllers II* (3)

Done	Curr	To do							



CERTIFICATE

Automation/Robotics Technician

Students must complete 27 hours for the Automation/Robotics Technician certificate.

Done Curr To do

Orientation

2 hours

COLL	105 Technical Career Dev. I (1)
COLL	106 Technical Career Dev. II (1)

Done	Curr	To do							

Mathematics

3 hours

MATH	104 Technical Mathematics* (3)
MATH	135 Algebra for Calculus* (3)

Done	Curr	To do							

Major courses

22 hours

AMT	102 Intro to Industrial Electricity (3)
AMT	104 Electrical Motor Controls* (3)
AMT	132 Industrial Hydraulics (3)
AMT	182 Intro to Automated Robotics* (3)
AMT	204 Programmable Controllers* (3)
AMT	206 Programmable Controllers II* (3)
AMT	284 Automated Robotic Programming* (3)

Done	Curr	To do							



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Advanced Manufacturing Technology:

Automation/Robotics Option

			Done	Curr	To do		Done	Curr	To do
Orientation		2 hours				60 hours total			
	COLL	105 Technical Career Dev I (1)							
	COLL	106 Technical Career Dev II (1)							
Communications		9 hours							
	Written Communications (6 hours)								
	ENGL	101*				ENGL 203*			
	ENGL	102*							
	Oral Communications (3 hours)								
	COMM	104*							
Mathematics		3 hours							
	MATH	135*				MATH 104*			
Civics		3 hours							
	HIST	106*				PLSC 103*			
	HIST	107*							
Advanced Manufacturing Core		19 hours							
	AMT	102 Intro to Industrial Electricity* (3)							
	AMT	104 Electrical Motor Controls* (3)				AMT 142 Mech Power Transmission (3)			
	AMT	111 Intro to Industrial Safety (1)				AMT 204 Programmable Controllers* (3)			
	AMT	132 Industrial Hydraulics* (3)				AMT 290 Manufacturing Internship* (3)			
Support Courses		9 hours							
	BSAD	115 Computer Concepts (3)				OR BSAD 125 Computer Apps (3)			
	DRFT	101 Intro to Engineering Drwg (3)							
	WELD	113 Intro to Welding* (3)							
Automation/Robotics		18 hours							
	AMT	162 Industrial Process Control I* (3)							
	AMT	182 Intro to Automated Robotics* (3)							
	AMT	206 Programmable Controllers II* (3)							
	AMT	284 Auto Robotic Programming* (3)							
	CNS	113 Intro to Networks (3)							
*Prerequisite course(s) or minimum test scores required. See catalog course descriptions for details.									
Required Online Course		0 hour							
	CVCS	Missouri Higher Ed Civics Examination							

Advanced Manufacturing Technology: Industrial Maintenance Technician Certificate

Advanced Manufacturing Technology: Manufacturing Maintenance Option AAS

The Advanced Manufacturing Technology program prepares students for employment in industries with automated manufacturing processes. The program is built around a set of core courses designed to give students the basic skill set required for this industry coupled with specialty courses allowing students to focus on various related options. This Program of Study addresses the Manufacturing Maintenance Option.

This certificate prepares students to enter a career in industrial maintenance with a skill set that will provide entry level knowledge of basic construction, welding, print reading, and industrial electricity. The electrical courses will include the use of electrical testing devices, troubleshooting techniques, and programmable logic controllers.

Program of Study

Certificate Technical Courses			12 hours
AMT	102	Introduction to Industrial Electricity (3)	
AMT	104*	Electrical Motor Control (3)	
AMT	111	Introduction to Industrial Safety (1)	
AMT	204*	Programmable Logic Controllers I (3)	
COLL	105	Technical Career Development I (1)	
COLL	106	Technical Career Development II (1)	
Certificate Support Courses			9 hours
BSAD	125	Computer Applications (3) -OR- BSAD 115	
DRFT	101	Introduction to Engineering Drawing (3)	
WELD	113	Introduction to Welding (3) – OR – WELD 151*	
Approved Certificate Electives			6 hours
Certificate Electives Required for AAS			(15 for AAS)
AMT	122	Basic Machining (Manual) (3) [Required for AAS]	
AMT	132*	Industrial Hydraulics (3) [Required for AAS]	
AMT	142*	Mech Power Trans (3) [Required for AAS]	
CONS	131	Plumbing (3) [Required for AAS]	
CONS	155*	Basic HVAC (3) [Required for AAS]	
Certificate Electives that are AAS Electives			
AMT	206*	Programmable Logic Controllers II (3)	
WELD	152*	Welding Theory II (2)	
WELD	153*	Fillet Plate Lab (5)	
WELD	154*	Groove Plate Lab (5)	
Communications			9 hours
Written Communications (6 hours)			
ENGL	101*	(3)	ENGL 102* (3)
ENGL	203*	(3)	
Oral Communications (3 hours)			
COMM	104*	(3)	
Mathematics			3 hours
MATH	104*	(3)	MATH 135* (3)
Civics			3 hours
PLSC	103*	(3)	HIST 106*, 107* (3)
Advanced Manufacturing Courses			3 hours
AMT	290*	Manufacturing Internship (3)	
Manufacturing Maintenance Courses			6 hours
<i>See additional elective options in certificate electives</i>			
AMT	162*	Industrial Process Control I (3)	
DEPT	XXX	Any Technology or Business Div Course (3)	
Required Online Course			0 hour
CVCS	101	Missouri Higher Ed Civics Examination	

Suggested Plan of Study

Fall Semester			Hours
AMT	102	Intro to Industrial Electricity	3
AMT	104	Electrical Motor Control	3
AMT	111	Intro to Industrial Safety	1
AMT	142	Manufacturing Mechanics	3
AMT	204	Programmable Logic Controllers	3
AMT	206	Programmable Logic Controllers II	3
TOTAL			16

Graduate with PLC Certificate

Spring Semester			Hours
AMT	122	Basic Machining (Manual)	3
BSAD	125	Computer Applications	3
COLL	105	Technical Career Development I	1
COLL	106	Technical Career Development II	1
DRFT	101	Intro to Engineering Drawing	3
WELD	113	Introduction to Welding	3
TOTAL			14

Graduate with Industrial Maintenance Tech Certificate

SECOND YEAR

Fall Semester			Hours
AMT	162	Industrial Process Control	3
COMM	104	Fundamentals of Speech	3
CONS	131	Plumbing (Fall only)	3
ENGL	101	English Composition	3
HIST	106	American History or PLSC 103	3
TOTAL			15

Spring Semester			Hours
AMT	132	Industrial Hydraulics	3
AMT	290	Internship	3
CONS	155	Basic HVAC (Heating, Vent, AC)	3
ENGL	102	English Composition II	3
MATH	135	Algebra for Calculus	3
TOTAL			15

Graduate with AMT: Manufacturing Maintenance AAS

Total CERTIFICATE Hours Required	27
Additional Hours Needed for AAS	33
Total AAS Hours Required	60

Courses for Certificate	
Additional Courses for AAS Degree	



CERTIFICATE

Industrial Maintenance Technician

Students must complete 27 hours for this certificate.

			Done	Curr	To do			Done	Curr	To do
Orientation			2 hours							
	COLL	105 Technical Career Development I (1)								
	COLL	106 Technical Career Development II (1)								
Major Courses			10 hours							
	AMT	102 Introduction to Industrial Electricity (3)				AMT	111 Intro to Indust Safety (1)			
	AMT	104 Electrical Motor Controls* (3)				AMT	204 Prgmble Controllers I* (3)			
Support Courses			9 hours							
	BSAD	115 Computer Concepts (3) - OR -				BSAD	125 Computer Apps (3)			
	DRFT	101 Introduction to Engineering Drawing (3)								
	WELD	113 Introduction to Welding (3)								
Approved Electives			6 hours							
	AMT	122 Basic Machining (Manual) (3)								
	AMT	132 Industrial Hydraulics* (3)								
	AMT	142 Mechanical Power Transmission* (3)								
	AMT	206 Programmable Controllers II* (3)								
	CONS	131 Plumbing (3)								
	CONS	155 Basic HVAC* (3)								
	WELD	152* Welding Theory II (2)								
	WELD	153* Fillet Plate Lab (5)								
	WELD	154* Groove Plate Lab (5)								



ASSOCIATE OF APPLIED SCIENCE DEGREE

Advanced Manufacturing: Manufacturing Maintenance Option

			Done	Curr	To do			Done	Curr	To do
Orientation			2 hours			60 hours total				
	COLL	105 Technical Career Dev I								
	COLL	106 Technical Career Dev II								
Communications			9 hours			Oral Communications (3 hours)				
	Written Communications (6 hours)					COMM	104*			
	ENGL	101*								
	ENGL	102*, 104*								
	ENGL	203*								
Mathematics			3 hours			MATH 104*				
	MATH	135*								
Civics			3 hours			PLSC 103*				
	HIST	106*								
	HIST	107*								
Advanced Manufacturing Core			19 hours							
	AMT	102 Intro to Industrial Electricity* (3)				AMT	142 Manufacturing Mechanics* (3)			
	AMT	104 Electrical Motor Controls* (3)				AMT	204 Programmable Controllers* (3)			
	AMT	111 Intro to Industrial Safety (1)				AMT	290 Manufacturing Internship* (3)			
	AMT	132 Industrial Hydraulics* (3)								
Support Courses			9 hours			OR BSAD 125				
	BSAD	115 Computer Concepts (3)								
	DRFT	101 Intro to Engineering Drwg (3)								
	WELD	113 Intro to Welding* (3)								
Maintenance Manufacturing Courses			15 hours							
	Required Courses (9 hours)					CONS	155 Basic HVAC* (3)			
	AMT	122 Basic Machining* (3)								
	CONS	131 Plumbing (3)								
	Specialty Electives (6 hours)					DEPT	XXX Any Technology or Business (3)			
	AMT	162 Ind Process Control* (3)								
	AMT	206 Progm Controllers II* (3)								
	CNS	101 Intro to Electronics (3)								
	CNS	113 Intro to Networks* (3)								
*Prerequisite course(s) or minimum test scores required. See catalog course descriptions for details.										
Required Online Course			0 hour							
	CVCS	101 Missouri Higher Ed Civics Exam								

Advanced Manufacturing Technology: Machining Certificate

This certificate prepares students to enter a career in industrial maintenance with a skill set that will provide entry level knowledge of basic Machining including Manual and Computer Numeric Control (CNC) Programming. This program will cover the CNC process including operator panel, HMI panel, program structure, Milling, and Turning. Students will receive hands-on training on all related tools and equipment.

Program of Study

Certificate Courses		17 hours
AMT 122	Basic Machining (Manual) (3)	
AMT 123	Measurement and Print Reading (3)	
AMT 124	CNC Programming (3)	
AMT 125	CNC Milling (3)	
AMT 126	CNC Turning (3)	
COLL 105	Technical Career Development I (1)	
COLL 106	Technical Career Development II (1)	

Suggested Plan of Study

FIRST YEAR			
Fall Semester			Hours
AMT 122	Basic Machining (Manual)		3
AMT 123	Measurement and Print Reading		3
AMT 124	CNC Programming		3
AMT 125	CNC Milling		3
AMT 126	CNC Turning		3
COLL 105	Technical Career Development I		1
COLL 106	Technical Career Development II		1
TOTAL			17
Total Hours Required			17



CERTIFICATE

AMT: Machining

General Education Core			Done	Curr	To do		Done	Curr	To do
Required Courses		17 hours							
	AMT	122 Basic Machining (Manual) (3)	_____	_____	_____				
	AMT	123 Measurement & Print Read (3)	_____	_____	_____				
	AMT	124 CNC Programming (3)	_____	_____	_____				
	AMT	125 CNC Milling (3)	_____	_____	_____				
	AMT	126 CNC Turning (3)	_____	_____	_____				
	COLL	105 Technical and Career Dev. I (1)	_____	_____	_____				
	COLL	106 Technical and Career Dev. II (1)	_____	_____	_____				

Agri-Business Technology: Agronomy Option AAS

This program offers the graduate an Associate of Applied Science degree (AAS) which provides education for specific careers in agricultural business, agronomy. Graduates are prepared for the world of work upon successful completion of the program. While an AAS is not designed to transfer, it is possible to transfer to a four-year college if planned accordingly. Students planning to transfer should consult their faculty advisor before registering for classes to assure appropriate classes are selected.

Program of Study

Orientation		1 hour	
AGRI	111		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
ENGL	203*		
Oral Communications (3 hours)			
COMM	104*		
Mathematics		3 hours	
MATH	125*		
Civics		3 hours	
HIST	106*, 107*		
PLSC	103*		
Agri-Business Core		27 – 29 hours	
AGEC	123*#		
AGEC	213*		
AGEC	223		
AGMC	205		
AGRI	202		
AGRI	212 & 222	OR	AGRI 204
AGRN	113		
AGRN	214*		
ANSC	114		
Agri-Business Agronomy		18 hours	
AGRI	123	ANSC	213
AGRI	223	OR	AGRI 190*
AGRN	223*	HORT	113
AGRN	243*		
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

*Prerequisite requirement

- Preferred class for this degree option

Suggested Plan of Study**FIRST YEAR**

Fall Semester		Hours
AGEC	223 Ag Computer App	3
AGRI	111 Ag Career Orientation	1
AGRN	113 Crop Science	3
MATH	125 Quantitative Reasoning	3
Approved Written Communications Course		3
TOTAL		13

Spring Semester		Hours
AGRI	123 Ag Chemicals	3
AGRN	243 Forage Crops (Even yrs)	3
ANSC	114 Animal Science	4
COMM	104 Fundamentals of Speech	3
Approved Written Communications Course		3
TOTAL		16

SECOND YEAR

Fall Semester		Hours
AGEC	213 Farm Business Mgmt (Fall Only)	3
AGMC	205 Ag Mechanics	3
AGRN	214 Fundamentals of Soil Science	4
AGRN	223 Grain Crops (Even yrs)	3
Approved Civics Course		3
TOTAL		16

Spring Semester		Hours
AGEC	123 Principles of Ag Econ	3
AGRI	202 Ag Capstone	2
AGRI	212 & AGRI 222 – OR – AGRI 204	4
AGRI	223 – OR – AGRI 190	3
ANSC	213 Feed & Nutrition	3
HORT	113 Greenhouse Management	3
TOTAL		18

TOTAL HOURS REQUIRED 61-63

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.



ASSOCIATE OF APPLIED SCIENCE DEGREE

AGRI-BUSINESS TECHNOLOGY: Agronomy Option

			Done	Curr	To do			Done	Curr	To do
Orientation			1 hour			61 hours				
	AGRI	111				COLL	101			
Communications			9 hours							
	Written Communications (6 hours)						Oral Communications (3 hours)			
	ENGL	101*				COMM	104*			
	ENGL	102*, 104*								
	ENGL	203*								
Mathematics			3 hours							
	MATH	125* (3)								
Civics			3 hours							
	HIST	106*(3)				PLSC	103*, 104* (3)			
	HIST	107* (3)								
Agri-Business Core			27 - 29 hours							
	AGEC	123 Prin of Ag Econ* (3) (Recommended)				AGRN	113 Crop Science (3)			
	AGEC	213 Farm Business Mgmt* (3)				AGRN	214* Soil Science (4)			
	AGEC	223 Ag Comp Apps (3)				ANSC	114 Animal Science (4)			
	AGMC	205 Ag Mechanics (3)								
	AGRI	202 Ag Capstone (2)								
	AGRI	212 & 222 SOE (2)				OR	AGRI 204 Internship (4)			
Agri-Business Agronomy Option			18 hours							
	AGRI	123 Ag Chemicals (3)								
	AGRI	223 Public Relations in Agri-Bs (3)								
	AGRN	223 Grain Crops* (3)								
	AGRN	243 Forage Crops* (3)								
	ANSC	213 Feeds & Nutrition (3)				OR	AGRI 190* World Foods (3)			
	HORT	113 Greenhouse Management (3)								
Required Online Courses			0 hour							
	CVCS	101 Missouri Higher Ed Civics Examination								

Agri-Business Technology: Livestock Production Option AAS

This program offers the graduate an Associate of Applied Science degree (AAS) which provides education for specific careers in agricultural business, livestock production. Graduates are prepared for the world of work upon successful completion of the program. While an AAS is not designed to transfer, it is possible to transfer to a four-year college if planned accordingly. Students planning to transfer should consult their faculty advisor before registering for classes to assure appropriate classes are selected.

Program of Study

Orientation		1 hour	
AGRI	111		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
ENGL	203*		
Oral Communications (3 hours)			
COMM	104*		
Mathematics		3 hours	
MATH	125*		
Civics		3 hours	
HIST	106*, 107*		
PLSC	103*		
Agri-Business Core		27 – 29 hours	
AGEC	123*#		
AGEC	213*		
AGEC	223		
AGMC	205		
AGRI	202		
AGRI	212 & 222	OR	AGRI 204
AGRN	113		
AGRN	214*		
ANSC	114		
Livestock Option		18 hours	
AGRN	243*	ANSC	213
AGMC	205	ANSC	232*
ANSC	153*	ANSC	233
ANSC	203		
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

*Prerequisite requirement

- Preferred class for this degree option

Suggested Plan of Study**FIRST YEAR**

Fall Semester	Hours
AGMC 205 Ag Mechanics	3
AGRI 111 Ag Career Orientation	1
ANSC 114 Animal Science	4
MATH 125 Quantitative Reasoning	3
Approved Written Communications Course	3
TOTAL	14

Spring Semester	Hours
AGEC 123 Principles of Ag Economics	3
AGEC 223 Agriculture Computer App.	3
AGRN 113 Crop Science	3
ANSC 233 Horse Science	3
Approved Written Communications Course	3
TOTAL	15

SECOND YEAR

Fall Semester	Hours
AGEC 213 Farm Business Management	3
AGRN 214 Fundamentals of Soil Science	4
ANSC 203 Meat Science	3
ANSC 232 Artificial Insemination	3
COMM 104 Fundamentals of Speech	3
TOTAL	16

Spring Semester	Hours
AGRI 202 Ag Capstone	2
AGRI 212 & AGRI 222 – OR – AGRI 204	2-4
AGRN 243 Forage Crops	3
ANSC 153 Beef Cattle Production	3
ANSC 213 Feeds & Nutrition	3
Approved Civics Course	3
TOTAL	16-18

TOTAL HOURS REQUIRED 61-63

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.



ASSOCIATE OF APPLIED SCIENCE DEGREE

AGRI-BUSINESS TECHNOLOGY: Livestock Production Option

			Done	Curr	To do				Done	Curr	To do
Orientation			1 hour			61 hours					
	AGRI	111 (Recommended)				COLL	101				
Communications			9 hours								
Written Communications (6 hours)						Oral Communications (3 hours)					
	ENGL	101*				COMM	104*				
	ENGL	102*, 104*									
	ENGL	203*									
Mathematics			3 hours								
	MATH	125*									
Civics			3 hours								
	HIST	106*				PLSC	103*, 104*				
	HIST	107*									
Agri-Business Core			27-29 hours								
	AGEC	123 Prin of Ag Econ*# (3) (Recommended)				AGRN	113 Crop Science (3)				
	AGEC	213 Farm Business Mgmt* (3)				AGRN	214 Soil Science* (4)				
	AGEC	223 Ag Comp Apps (3)				ANSC	114 Animal Science (4)				
	AGMC	205 Ag Mechanics (3)									
	AGRI	202 Ag Capstone (2)									
	AGRI	212 & 222 SOE (2)				OR	AGRI 204 Internship* (4)				
Agri-Business Livestock Option			18 hours								
	AGRN	243 Forage Crops* (3)									
	ANSC	153 Beef Production* (3)									
	ANSC	203 Meat Science (3)									
	ANSC	213 Feeds & Nutrition (3)									
	ANSC	232 Artificial Insemination* (3)									
	ANSC	233 Horse Science (3)									
Required Online Course			0 hour								
	CVCS	101 Missouri Higher Ed Civics Examination									

Agri-Business Technology: Marketing and Management Option AAS

This program offers the graduate an Associate of Applied Science degree (AAS) which provides education for specific careers in agricultural business marketing and management. Graduates are prepared for the world of work upon successful completion of the program. While an AAS is not designed to transfer, it is possible to transfer to a four-year college if planned accordingly. Students planning to transfer should consult their faculty advisor before registering for classes to assure appropriate classes are selected.

Program of Study

Orientation		1 hour	
AGRI	111		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
ENGL	203*		
Oral Communications (3 hours)			
COMM	104*		
Mathematics		3 hours	
MATH	125*		
Civics		3 hours	
HIST	106*, 107*		
PLSC	103*		
Agri-Business Core		27 – 29 hours	
AGEC	123*#		
AGEC	213*		
AGEC	223		
AGMC	205		
AGRI	202		
AGRI	212 & 222*	OR	AGRI 204*
AGRN	113		
AGRN	214*		
ANSC	114		
Marketing & Management		Select 18 hours	
AGRI	190*	BMGT	223
AGRI	223	BMGT	285*
BMGT	175	BSAD	230
BMGT	200		
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

*Prerequisite requirement

- Preferred class for this degree option

Suggested Plan of Study**FIRST YEAR**

Fall Semester	Hours
AGMC 205 Ag Mechanics	3
AGRI 111 Ag Career Orientation	1
ANSC 114 Animal Science	4
MATH 125 Quantitative Reasoning	3
Approved Written Communications	3
TOTAL	14

Spring Semester	Hours
AGEC 123 Principles of Ag Economics	3
AGEC 223 Agriculture Computer App	3
AGRN 113 Crop Science	3
COMM 104 Fundamentals of Speech	3
Approved Written Communications	3
TOTAL	15

SECOND YEAR

Fall Semester	Hours
AGEC 213 Farm Business Management	3
AGRN 214 Fundamentals of Soil Science	4
BMGT 175 Management	3
BMGT 223 Business Ethics	3
Approved Civics Course	3
TOTAL	16

Spring Semester	Hours
AGRI 190 World Foods	3
AGRI 202 Ag Capstone	2
AGRI 212 & AGRI 222 – OR – AGRI 204	2-4
AGRI 223 Public Relations in Agri-Business	3
BMGT 285 Human Resource Mgmt	3
BSAD 230 Business Law	3
TOTAL	16-18

TOTAL HOURS REQUIRED 61-63

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.



ASSOCIATE OF APPLIED SCIENCE DEGREE

AGRI-BUSINESS TECHNOLOGY: Marketing & Management Option

			Done	Curr	To do				Done	Curr	To do
Orientation			1 hour			61 hours					
	AGRI	111									
Communications			9 hours								
	Written Communications (6 hours)						Oral Communications (3 hours)				
	ENGL	101*					COMM	104*			
	ENGL	102*, 104*									
	ENGL	203*									
Mathematics			3 hours								
	MATH	125*									
Civics			3 hours								
	HIST	106*					PLSC	103*, 104*			
	HIST	107*									
Agri-Business Core			27-29 hours								
	AGEC	123 Prin of Ag Econ*# (3) (Recommended)									
	AGEC	213 Farm Business Mgmt* (3)									
	AGEC	223 Ag Comp Apps (3)									
	AGMC	205 Ag Mechanics (3)									
	AGRI	202 Ag Capstone (2)									
	AGRI	212 & 222 SOE (2)					OR	AGRI 204 Internship* (4)			
	AGRN	113 Crop Science (3)									
	AGRN	214 Soil Science* (4)									
	ANSC	114 Animal Science (4)									
Agri-Business Marketing & Management			18 hours								
	AGRI	190 World Food and Society* (3)					Students must select courses from Agriculture or approved courses from Business.				
	AGRI	223 Public Relations in Agri-Business (3)									
	BMGT	175 Management (3)									
	BMGT	200 Marketing (3)									
	BMGT	223 Business Ethics (3)									
	BMGT	285 Human Resource Management* (3)									
	BSAD	230 Business Law (3)									
Required Online Course			0 hour								
	CVCS	101 Missouri Higher Ed Civics Examination									

Agriculture – Ag Business Option AA

For students pursuing a four-year degree in all areas of agriculture, pre-veterinary medicine, and wildlife conservation, the following curriculum is suggested. For best transfer, students should contact the college to which they plan to transfer prior to graduation.

Program of Study

Orientation		1 hour	
AGRI	111#	COLL	101
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		3 hours	
MATH	125*, 130*, 135*#		
Science		7 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
Lab		Non-Lab	
BIOL	101#, 110, 120	BIOL	102
BIOL	152*	PHYS	102
CHEM	101, 111*#	PHYS	105
GEOL	115, 210*		
PHYS	101, 190*		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Civics (3 hours)			
HIST	106*, 107*	AGEC	123*#
PLSC	103*	ECON	201*, 202*
		GEOG	111
		PSYC	101, 211*
		SOC	101
GE CORE Electives		5 hours	
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study			
Major Courses		17 hours	
Required Courses (14 Hours)			
AGEC	223	AGRN	214
AGRN	113	ANSC	114
Approved Electives (3 Hours)			
AGEC	213	AGRI	223
AGRI	190	AGRI	233
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

Suggested Plan of Study**FIRST YEAR**

Fall Semester	Hours
AGRI 111 Ag Career Development	1
AGRN 113 Crop Science	3
COMM 104 Fundamentals of Speech	3
ENGL 101 English Composition I	3
Approved Science Course	5
TOTAL	15

Spring Semester	Hours
AGEC 223 Ag Computer Applications	3
ANSC 114 Animal Science	4
ENGL 102 English Composition II	3
MATH 135 Algebra for Calculus	3
Approved Humanities Course	3
TOTAL	16

SECOND YEAR

Fall Semester	Hours
AGRN 214 Fundamentals of Soil Science	4
Approved Humanities Course – OR – Ag Elective	3
Approved Science Course	5
Approved Soc & Behavioral Science Course	3
TOTAL	15

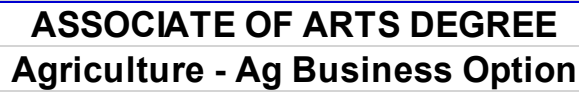
Spring Semester	Hours
AGEC 123 Principles of Ag Economics	3
Approved Ag Elective – OR – Humanities Course	3
Approved Civics Course	3
Approved GE Core Elective	2-5
Approved Humanities Course	3
TOTAL	14-17

TOTAL HOURS REQUIRED 60-63

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

*Prerequisite required

- Preferred class for this degree option



Programs of Study

Agriculture – Ag Education Option AA

For students pursuing a four-year degree in all areas of agriculture, pre-veterinary medicine, and wildlife conservation, the following curriculum is suggested. For best transfer, students should contact the college to which they plan to transfer prior to graduation. The AAT degree requires a minimum GPA of 2.75 and a passing score approved by DESE on each section of the MoGEA. Because GPA and MoGEA entrance score requirements vary by institution, it is important to work closely with your Ag education advisor at Crowder and the institution to which you plan to transfer. Students must register with FCSR and have a clearance letter before completing any observation in schools.

Program of Study

Orientation		1 hour	
AGRI	111#	COLL	101
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		3 hours	
MATH	125*, 130*, 135*#		
Science		7 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
	Lab		Non-Lab
BIOL	101#, 110, 120	BIOL	102
BIOL	152*	PHYS	102
CHEM	111*#	PHYS	105
GEOL	115, 210*		
PHYS	101, 190*		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Required (9 hours)		Additional Elective Courses	
HIST	106*, 107*	AGEC	123*#
PLSC	103*	ECON	201*, 202*
PSYC	101	GEOG	111
		PSYC	211*
		SOC	101
GE CORE Electives		5 hours	
AGEC 123—Approved Elective—Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study			
Major Courses		21 hours	
AGRN	113	EDUC	231
AGRN	214*	EDUC	251
ANSC	114	HORT	113
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

Suggested Plan of Study

FIRST YEAR			
Fall Semester			Hours
AGRI	111 Ag Career Development		1
ANSC	114 – OR – AGRN 113 (3hrs)		4
ENGL	101 English Composition I		3
PSYC	101 General Psychology		3
	Approved Science Course		3-5
TOTAL			14-16
Spring Semester			Hours
AGRN	113 – OR – ANSC 114 (4hrs)		3
COMM	104 Fundamentals of Speech		3
ENGL	102 English Composition II		3
HIST	106 – OR – HIST 107		3
MATH	135 Algebra for Calculus		3
TOTAL			15
SECOND YEAR			
Fall Semester			Hours
AGRN	214 Fundamentals of Soil Science		4
EDUC	231 Educational Psychology		3
PLSC	103 – OR – PLSC 104		3
	Approved GE Core Elective		3
	Approved Science Course		3-5
TOTAL			16-18
Spring Semester			Hours
EDUC	251 Teaching Prof w/Field Exp.		3
HORT	113 Greenhouse Management		3
	Approved GE Core Elective		2-3
	Approved Humanities Course		3
	Approved Humanities Elective		3
	Approved Humanities Course		3
TOTAL			17-18
TOTAL HOURS REQUIRED			62-67

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

*Prerequisite required

- Preferred class for this degree option



ASSOCIATE OF ARTS DEGREE

Agriculture - Ag Education Option

General Education Core			Done	Curr	To do		Done	Curr	To do
Orientation			1 hour			Or	64 hours		
	AGRI	111 (Recommended)				COLL	101		
Communications			9 hours						
	Written Communications (6 hours)						Oral Communications (3 hours)		
	ENGL	101*				COMM	104*		
	ENGL	102*, 104*							
Humanities			9 hours						
	ART	101, 106				HIST	101*, 102*		
	ASL	101, 102*				MUSC	101		
	ENGL	109*, 222*, 225*				PHIL	101*, 121, 201*, 202*		
	ENGL	230*, 235*, 240*, 245*				SPAN	101, 102*		
	FREN	101				TA	205		
Mathematics			3 hours						
	MATH	125*							
	MATH	130*							
	MATH	135* (Recommended)							
Science			7 hours						
	Lab					Non-Lab			
	BIOL	101, 110, 120				BIOL	102		
	BIOL	152*				PHYS	102		
	CHEM	101				PHYS	105		
	CHEM	111* (Recommended)							
	GEOL	115, 210*							
	PHYS	101, 190*							
Social and Behavioral Science			9 hours						
	Civics 6 hours					Additional 3 hours			
	HIST	106*				AGEC	123* (Recommended)		
	HIST	107				ECON	201*, 202*		
	PLSC	103*, 104*				GEOG	111		
						PSYC	101 (Required)		
						PSYC	211*		
						SOC	101		
GE Core Electives			5 hours						
AGEC 123 - Approved Elective. Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study.									
Major Courses			21 hours						
	AGRN	113 Crop Science (3)				## Ag Education majors need to take PLSC 103 or PLSC 104 and HIST 106 to meet DESE certification guidelines.			
	AGRN	214 Fund Soil Science* (4)							
	ANSC	114 Intro to Animal Sci (4)							
	EDUC	231 Educational Psych (3)							
	EDUC	251 Teaching Pro w/Field Exp (3)							
	HORT	113 Greenhouse Mgmt (3)							
Required Online Course			0 hour						
	CVCS	101 MO Higher Ed Civics Exam							

Agriculture - Agronomy Option AA

For students pursuing a four-year degree in all areas of agriculture, pre-veterinary medicine, and wildlife conservation, the following curriculum is suggested. For best transfer, students should contact the college to which they plan to transfer prior to graduation.

Program of Study

Orientation		1 hour	
AGRI	111#	COLL	101
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		3 hours	
MATH	125*, 130*, 135*#		
Science		7 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
	Lab		Non-Lab
BIOL	101#, 110, 120	PHYS	102
BIOL	152*	PHYS	105
CHEM	111*#		
GEOL	115, 210*		
PHYS	101, 190*		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Civics (3 hours)			
HIST	106*, 107*	AGEC	123*#
PLSC	103*	ECON	201*, 202*
		GEOG	111
		PSYC	101, 211*
		SOC	101
GE CORE Electives		5 hours	
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study			
Major Courses		17 hours	
Required Courses (14 Hours)			
AGEC	223	AGRN	214*
AGRN	113	ANSC	114
Approved Electives (3 Hours)			
AGRI	123	ANSC	213
AGRI	233	HORT	101
AGRN	121	HORT	103
AGRN	221	HORT	113
AGRN	223	HORT	204
AGRN	243		
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

Suggested Plan of Study

FIRST YEAR				
Fall Semester				Hours
AGRI	111	Ag Career Development		1
AGRN	113	Crop Science		3
COMM	104	Fundamentals of Speech		3
ENGL	101	English Composition I		3
MATH	135	Algebra for Calculus		3
Approved GE Core Elective				3
TOTAL				16
Spring Semester				Hours
AGEC	223	Ag Computer Applications		3
ANSC	114	Animal Science		4
ENGL	102	English Composition II		3
Approved Science Course				3-5
TOTAL				13-15
SECOND YEAR				
Fall Semester				Hours
AGRN	214	Fundamentals of Soil Science		4
Approved Civics Course				3
Approved Humanities Course or Ag Elective				3
Approved Science Course				3-5
TOTAL				13-15
Spring Semester				Hours
AGEC	123	Principles of Ag Economics		3
Approved Ag Elective or Humanities Course				3
Approved GE Core Elective				2
Approved Humanities Course				3
Approved Humanities Course or Ag Elective				3
TOTAL				14
TOTAL HOURS REQUIRED				60

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

*Prerequisite required

#Preferred class for this degree option



ASSOCIATE OF ARTS DEGREE

Agriculture - Agronomy Option

General Education Core			Done	Curr	To do		Done	Curr	To do
Orientation						Or			
	AGRI 111	(Recommended)				COLL 101			
Communications									
	Written Communications (6 hours)					Oral Communications (3 hours)			
	ENGL	101*				COMM	104*		
	ENGL	102*, 104*							
Humanities									
	ART	101, 106				HIST	101*, 102*		
	ASL	101, 102*				MUSC	101		
	ENGL	109*, 222*, 225*				PHIL	101*, 121, 201*, 202*		
	ENGL	230*, 235*, 240*, 245*				SPAN	101, 102*		
	FREN	101				TA	205		
Mathematics									
	MATH	125*				MATH	135* (Recommended)		
	MATH	130*							
Science									
	Lab					Non-Lab			
	BIOL	101, 110, 120				PHYS	102		
	BIOL	152*				PHYS	105		
	CHEM	111* (Recommended)							
	GEOL	115, 210*							
	PHYS	101, 190*							
Social and Behavioral Science									
	Civics (3 hours)								
	HIST	106*				AGEC	123* (Recommended)		
	HIST	107*				ECON	201*, 202*		
	PLSC	103*, 104*				GEOG	111		
						PSYC	101, 211*		
						SOC	101		
GE Core Electives									
Any additional 5 credit hours from courses listed above.									
Courses cannot be used as Core electives if counted under another section of this Program of Study.									
Major Courses									
	Required (14 hours)					Approved Electives (3 hours)			
	AGEC	223 Ag Computer Apps (3)				AGRI	123 Agriculture Chemicals (3)		
	AGRN	113 Crop Science (3)				AGRI	233 Travel Seminar in Agriculture (3)		
	AGRN	214 Fund Soil Science* (4)				AGRN	121 Crop Evaluation (1)		
	ANSC	114 Intro to Animal Sci (4)				AGRN	221 Soil Evaluation (1)		
						AGRN	223 Grain Crops (3)		
						AGRN	243 Forage Crops (3)		
						ANSC	213 Feeds and Nutrition (3)		
						HORT	101 General Horticulture (3)		
						HORT	103 Floriculture (3)		
						HORT	113 Greenhouse Management (3)		
						HORT	204 Nursery Mgmt/Landscape (4)		
						Courses determined by transferring institution's requirements and consultation with the Agriculture faculty.			
Required Online Course									
	CVCS	101 MO Higher Ed Civics Exam							

Agriculture - Animal Science Option AA

For students pursuing a four-year degree in all areas of agriculture, pre-veterinary medicine, and wildlife conservation, the following curriculum is suggested. For best transfer, students should contact the college to which they plan to transfer prior to graduation.

Program of Study			
Orientation		1 hour	
AGRI	111#	COLL	101
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		3 hours	
MATH	125*, 130*, 135*#		
Science		7 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
Lab		Non-Lab	
BIOL	101, 110, 120	PHYS	102
BIOL	152*	PHYS	105
CHEM	111* #		
GEOL	115, 210*		
PHYS	101, 190*		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Civics (3 hours)			
HIST	106*, 107*	AGEC	123*#
PLSC	103*	ECON	201*, 202*
		GEOG	111
		PSYC	101, 211*
		SOC	101
GE CORE Electives		5 hours	
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study			
Major Courses		17 hours	
Required Courses (13 Hours)			
AGEC	223	ANSC	114*
AGRN	113	ANSC	213
Approved Electives (4 Hours)			
AGRI	233	ANSC	180
AGRN	214	ANSC	223
AGRN	243	ANSC	232
ANSC	101	ANSC	233
ANSC	153		
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

Suggested Plan of Study**FIRST YEAR**

Fall Semester	Hours
AGRI 111 Ag Career Development	1
ANSC 114 Animal Science	4
COMM 104 Fundamentals of Speech	3
ENGL 101 English Composition I	3
MATH 135 Algebra for Calculus	3
Approved GE Core Elective	3
TOTAL	17

Spring Semester	Hours
AGEC 223 Ag Computer Applications	3
AGRN 113 Crop Science	3
ENGL 102 English Composition II	3
Approved GE Core Elective	2
Approved Science Course	3-5
TOTAL	14-16

SECOND YEAR

Fall Semester	Hours
AGEC 123 Principles of Ag Economics	3
CHEM 111 General Chemistry	5
Approved Civics Course	3
Approved Humanities Course/or Ag Elective	3-4
TOTAL	14-15

Spring Semester	Hours
ANSC 213 Feeds & Nutrition	3
Approved Ag Elective/or Humanities Course	3-4
Approved Humanities Course	3
Approved Humanities Course	3
Approved Soc & Behavioral Science Course	3
TOTAL	15-16

TOTAL HOURS REQUIRED 60-64

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

*Prerequisite required

- Preferred class for this degree option



ASSOCIATE OF ARTS DEGREE

Agriculture - Animal Science Option

General Education Core			Done	Curr	To do	60 hours			Done	Curr	To do
Orientation			1 hour			Or					
	AGRI	111 (Recommended)					COLL	101			
Communications			9 hours								
Written Communications (6 hours)						Oral Communications (3 hours)					
	ENGL	101*					COMM	104*			
	ENGL	102*, 104*									
Humanities			9 hours								
	ART	101, 106					HIST	101*, 102*			
	ASL	101, 102*					MUSC	101			
	ENGL	109*, 222*, 225*					PHIL	101*, 121, 201*, 202*			
	ENGL	230*, 235*, 240*, 245*					SPAN	101, 102*			
	FREN	101					TA	205			
Mathematics			3 hours								
	MATH	125*, 130*					MATH	135* (Recommended)			
Science			7 hours								
	Lab						Non-Lab				
	BIOL	101, 110, 120					PHYS	102			
	BIOL	152*					PHYS	105			
	CHEM	111* (Recommended)									
	GEOL	115, 210*									
	PHYS	101, 190*									
Social and Behavioral Science			9 hours								
Civics (3 hours)											
	HIST	106*					AGEC	123* (Recommended)			
	HIST	107*					ECON	201*, 202*			
	PLSC	103*, 104*					GEOG	111			
							PSYC	101, 211*			
							SOC	101			
GE Core Electives			5 hours								
Any additional 5 credit hours from courses listed above.											
Courses cannot be used as Core electives if counted under another section of this Program of Study.											
Major Courses			17 hours								
Required (13 hours)						Approved Electives (4 hours)					
	AGEC	223 Ag Computer Apps (3)					AGRI	233 Travel Seminar in Agriculture (3)			
	AGRN	113 Crop Science (3)					AGRN	214 Fundamentals of Soil Science (4)			
	ANSC	114* Intro to Animal Sci (4)					AGRN	243 Forage Crops (3)			
	ANSC	213 Feeds & Nutrition (3)					ANSC	101 Livestock Selection (1)			
							ANSC	153 Beef Cattle Production (3)			
							ANSC	180 Intro to Veterinary Science (2)			
							ANSC	223 Farm Animal Health (3)			
							ANSC	232 Artificial Insem & Reprod (3)			
							ANSC	233 Horse Science (3)			
						Courses determined by transferring institution's requirements and consultation with the Agriculture faculty.					
Required Online Course			0 hour								
	CVCS	101 MO Higher Ed Civics Exam									

Agriculture - Poultry Science Option AA

For students pursuing a four-year degree in all areas of agriculture, pre-veterinary medicine, and wildlife conservation, the following curriculum is suggested. For best transfer, students should contact the college to which they plan to transfer prior to graduation.

Program of Study

Orientation		1 hour	
AGRI	111#	COLL	101
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		3 hours	
MATH	125*, 130*, 135*#		
Science		7 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
	Lab		Non-Lab
BIOL	101, 110, 120	PHYS	102
BIOL	152*	PHYS	105
CHEM	104 or 111*#		
GEOL	115, 210*		
PHYS	101, 190*		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Civics (3 hours)			
HIST	106*, 107*	AGEC	123*#
PLSC	103*	ECON	201*, 202*
		GEOG	111
		PSYC	101, 211*
		SOC	101
GE CORE Electives		5 hours	
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study			
Major Courses		17 hours	
AGEC	223	ANSC	213
AGRN	113	POSC	104
ANSC	114*	POSC	105
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

Suggested Plan of Study**FIRST YEAR**

Fall Semester	Hours
AGRI 111 Ag Career Development	1
ANSC 114 Animal Science	4
COMM 104 Fundamentals of Speech	3
ENGL 101 English Composition I	3
MATH 135 Algebra for Calculus	3
Approved GE Core Elective	3
TOTAL	17

Spring Semester	Hours
AGEC 223 Ag Computer Applications	3
AGRN 113 Crop Science	3
ENGL 102 English Composition II	3
POSC 104 Intro to Careers in Poultry	2
Approved Science Course	3-5
TOTAL	14-16

SECOND YEAR

Fall Semester	Hours
AGEC 123 Principles of Ag Economics	3
CHEM 104 -OR- CHEM 111	4-5
POSC 105 Avian Biology	2
Approved GE Core Elective	2
Approved Humanities Course	3
TOTAL	14-15

Spring Semester	Hours
ANSC 213 Feeds & Nutrition	3
Approved Civics Course	3
Approved Humanities Course	3
Approved Humanities Course	3
Approved Soc & Behavioral Science Course	3
TOTAL	15

TOTAL HOURS REQUIRED 61-63

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

*Prerequisite required

- Preferred class for this degree option



ASSOCIATE OF ARTS DEGREE

Agriculture - Poultry Science Option

General Education Core			Done	Curr	To do			Done	Curr	To do
Orientation			1 hour			Or	61 hours			
	AGRI	111 (Recommended)				COLL	101			
Communications			9 hours							
	Written Communications (6 hours)						Oral Communications (3 hours)			
	ENGL	101*				COMM	104*			
	ENGL	102*, 104*								
Humanities			9 hours							
	ART	101, 106				HIST	101*, 102*			
	ASL	101, 102*				MUSC	101			
	ENGL	109*, 222*, 225*				PHIL	101*, 121, 201*, 202*			
	ENGL	230*, 235*, 240*, 245*				SPAN	101, 102*			
	FREN	101				TA	205			
Mathematics			3 hours							
	MATH	125*, 130*				MATH	135* (Recommended)			
Science			7 hours							
	Lab					Non-Lab				
	BIOL	101, 110, 120				PHYS	102			
	BIOL	152*				PHYS	105			
	CHEM	101, 104								
	CHEM	111* (Recommended)								
	GEOL	115, 210*								
	PHYS	101, 190*								
Social and Behavioral Science			9 hours							
	Civics (3 hours)									
	HIST	106*				AGEC	123* (Recommended)			
	HIST	107*				ECON	201*, 202*			
	PLSC	103*, 104*				GEOG	111			
						PSYC	101, 211*			
						SOC	101			
GE Core Electives			5 hours							
Any additional 5 credit hours from courses listed above.										
Courses cannot be used as Core electives if counted under another section of this Program of Study.										
Major Courses			17 hours							
	AGEC	223 Ag Computer Apps (3)								
	AGRN	113 Crop Science (3)								
	ANSC	114 Intro to Animal Sci (4)								
	ANSC	213 Feeds & Nutrition (3)								
	POSC	104 Careers in Poultry Sci (2)								
	POSC	105 Avian Biology (2)								
Required Online Course			0 hour							
	CVCS	101 MO Higher Ed Civics Exam								

Alternative Energy: Solar Energy Technician Certificate

Alternative Energy – Solar AAS

The Alternative Energy-Solar AAS degree provides students with a unique applied foundation in solar technologies. The program covers all aspects of solar technologies and is designed to give the student a strong footing for employment or transfer to any of our cooperative programs that are available at Missouri State University or Pittsburg State University. Students in the Alternative Energy-Solar program include engineering, science, and technology majors. Students are required to take the entry level NABCEP PV Associate exam given as part of the ENER 220 course. Students must also report their score to the College for completion of this degree program.

The Solar Energy Technician certificate emphasizes learning through coursework and applied hands-on labs. The certificate allows students to move directly into the alternative energy workforce installing solar hardware and systems. Students are required to take the entry level NABCEP PV Associate exam given as part of the ENER 220 course. Students must also report their score to the College for completion of this certificate program.

Program of Study

Certificate Courses		26 hours
AMT	112 Occupational Safety (3)	
COLL	105 Tech. Car. Dev. I (1)	
COLL	106 Tech. Car. Dev. II (1)	
CONS	105 Introduction to Construction (3)	
CONS	108 Energy Conservation Techniques (3)	
CONS	141* Electrical (3)	
ENER	105 Intro to Energy (3)	
ENER	221 PV Grid (3)	
ENER	222 PV Battery (3)	
ENER	265 PM (3)	
Communications		9 hours
Written Communications (6 hours)		
ENGL	101* (3)	
ENGL	102* (3)	
ENGL	203* (3)	
Oral Communications (3 hours)		
COMM	104* (3)	
Mathematics		3 hours
MATH	104* (3)	
MATH	125* (3)	
MATH	135* (3)	
Civics		3 hours
HIST	106*, 107*	
PLSC	103*	
Required Courses		6 hours
CNS	101 (3)	
DRFT	101 (3) - OR - DRFT 153 (3)	
Approved Electives		13 hours
AMT	102 (3)	ENER 142 (4)
BSAD	150 (3)	ENER 156, 157, 158 Projects (1-3)
CONS	245 (3)	ENER 256, 257, 258 Projects (1-3)
CONS	290* (3)	
Required Online Course		0 hour
CVCS	101 Missouri Higher Ed Civics Examination	

Suggested Plan of Study

FIRST YEAR

Fall Semester		Hours
AMT	112 Occupational Safety	3
CONS	105 Introduction to Construction	3
CONS	108 Energy Conservation Techniques	3
CONS	141 Electrical	3
ENER	105 Introduction to Energy	3
TOTAL		15

Spring Semester		Hours
ENER	221 PV Grid	3
ENER	222 PV Battery	3
ENER	265 Project Management	3
COLL	105 Tech. Career Develop. I	1
COLL	106 Tech. Career Develop. II	1
ENGL	101 English Composition	3
TOTAL		14

Graduate with Solar Technician Certificate

Fall Semester		Hours
CNS	101 Intro to Electronics	3
Approved Civics Course		3
Approved Elective		3
Approved Mathematics Course		3
Approved Written Communications Course		3
TOTAL		15

Spring Semester		Hours
COMM	104 Fundamentals of Speech	3
DRFT	153 Construction Graphics	3
Approved Elective		3
Approved Elective		3
Approved Elective		4
TOTAL		16

Graduate with Solar AAS

Total CERTIFICATE Hours Required	26
Additional Hours Needed for AAS	34
Total AAS Hours Required	60

Students interested in enrolling in alternative energy classes should be advised through the MARET Center. For additional information, please contact 417-455-5422.

* Prerequisite requirement

Courses for Certificate	
Additional Courses for AAS Degree	



CERTIFICATE Solar Energy Technician

Students must earn 26 hours for this certificate.

		Done	Curr	To do			
Orientation		2 hours					
COLL	105 & 106						
Major Courses		24 hours					
AMT	112 Occupational Safety (3)						
CONS	105 Intro to Construction (3)						
CONS	108 Energy Conservation Techniques (3)						
CONS	141 Electrical* (3)						
ENER	105 Intro to Energy (3)						
ENER	221 PV Grid-Tied Electric Systems* (3)						
ENER	222 PV Battery-Based Elec. Sys.* (3)						
ENER	265 Alt Energy Markt & Proj Mgmt* (3)						



ASSOCIATE OF APPLIED SCIENCE DEGREE Alternative Energy - Solar

		Done	Curr	To do				Done	Curr	To do
Orientation		2 hours			60 hours total					
COLL	105 & 106									
Communications		9 hours								
Written Communications (6 hours)					Oral Communications (3 hours)					
ENGL	101*				COMM	104*				
ENGL	102*									
ENGL	203*									
Mathematics		3 hours								
MATH	104*				MATH	125*				
MATH	135*									
Civics		3 hours								
HIST	106*				PLSC	103*				
HIST	107*									
Solar										
Required Courses		30 hours			Approved Electives (13 hours)					
AMT	112 Occupational Safety (3)				AMT	102 Intro to Industrial Elect (3)				
CNS	101 Introduction to Electronics (3)				BSAD	150 Intro to Business (3)				
CONS	105 Introduction to Construction (3)				CONS	245 Project Management (3)				
CONS	108 Energy Conservation Tech (3)				CONS	290 Construction Internship* (3)				
CONS	141 Electrical* (3)				ENER	142 Introduction to Wind (4)				
DRFT	153 Construction Graphics (3)				ENER	156, 157, 158 Projects (1-3)				
ENER	105 Introduction to Energy (3)				ENER	256, 257, 258 Projects (1-3)				
ENER	221 PV Grid-Tied Elec Syst* (3)									
ENER	222 PV Battery-Based Elec Syst* (3)									
ENER	265 Alt Energy Mktg & Proj Mgmt* (3)									
Required Online Course		0 hour								
CVCS	101 Missouri Higher Ed Civics Examination									

Art and Design AA

The Associate in Arts Degree in Art and Design provides the career student with the basic and comprehensive tools of art and design foundations. With a solid academic structure from Crowder College, students can transfer to four-year institutions where bachelor degrees are offered in graphic design, painting, sculpture, fibers, ceramics, drawing, jewelry, art history, art education, media and computer arts. Elective courses should be determined by contacting the college and department to which students wish to transfer. The following program is suggested if students have not yet chosen the institution to which they plan to transfer following graduation.

Program of Study

Orientation		1 hour	
COLL	101		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101
ENGL	109, 222, 225	PHIL	101*, 121, 201*, 202*
ENGL	230, 235, 240, 245	SPAN	101, 102*
FREN	101	TA	205
Mathematics		3 hours	
MATH	125* #, 130*, 135*		
Science		7 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
Lab		Non-Lab	
BIOL	101, 110, 120	BIOL	102
BIOL	152*	PHYS	102
CHEM	101, 104, 111*	PHYS	105
GEOL	115, 210*		
PHYS	101, 190*		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Civics (3 hours)			
HIST	106*, 107*	ECON	201*, 202*
PLSC	103*	GEOG	111
		PSYC	101, 211*
		SOC	101
GE CORE Electives		5 hours	
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study			
Major Courses		18 hours	
ART	103	ART	107 – OR – ART 119
ART	104	ART	110
ART	106	ART	111
Other Enhancement Course Options			
ART	105	ART	207*
ART	189	ART	210*
ART	205	ART	211*
ART	206*	ART	219*
Required Online Course		0 hour	
CVCS	101 Missouri Higher Ed Civics Examination		

Suggested Plan of Study

FIRST YEAR

Fall Semester	Hours
ART 104 Intro to 3-D Design	3
COLL 101 College Orientation	1
ENGL 101 English Composition I	3
MATH 125 Quantitative Reasoning	3
MUSC 101 – OR – TA 205	3
Approved GE Core Elective	3
TOTAL	16

Spring Semester	Hours
ART 103 Intro to 2-D Design	3
ART 106 Drawing I	3
COMM 104 Fundamentals of Speech	3
ENGL 102 English Composition II	3
Approved Science Course	3-5
TOTAL	17

SECOND YEAR

Fall Semester	Hours
ART 110 Ceramics I	3
Approved GE Core Elective	2
Approved Humanities Course	3
Approved Science Course	3-5
Approved Soc & Behavioral Science Course	3
TOTAL	14-16

Spring Semester	Hours
ART 107 Painting I-OR- ART 119	3
ART 111 Sculpture I	3
Approved Civics Course	3
Approved Humanities Course	3
Approved Soc & Behavioral Science Course	3
TOTAL	15

TOTAL HOURS REQUIRED 62-64

*Prerequisite required

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

- Preferred class for this degree option



ASSOCIATE OF ARTS DEGREE

Art and Design

General Education Core				Done	Curr	To do		Done	Curr	To do
Orientation		1 hour						62 hours		
	COLL	101								
Communications		9 hours								
	Written Communications (6 hours)					Oral Communications (3 hours)				
	ENGL	101*				COMM	104*			
	ENGL	102*, 104*								
Humanities		9 hours								
	ART	101, 106				MUSC	101			
	ASL	101, 102*				PHIL	101*, 121, 201*, 202*			
	ENGL	109*, 222*, 225*				SPAN	101, 102*			
	ENGL	230*, 235*, 240*, 245*				TA	205			
	FREN	101								
	HIST	101*, 102*								
Mathematics		3 hours								
	MATH	125* (Recommended)				MATH	130*, 135*			
Science		7 hours								
	Lab					Non-Lab				
	BIOL	101, 110, 120				BIOL	102			
	BIOL	152*				PHYS	102			
	CHEM	101, 104, 111*				PHYS	105			
	GEOL	115, 210*								
	PHYS	101, 190*								
Social and Behavioral Science		9 hours								
	Civics (3 hours)									
	HIST	106*				ECON	201*, 202*			
	HIST	107*				GEOG	111			
	PLSC	103*, 104*				PSYC	101, 211*			
						SOC	101			
GE Core Electives		5 hours								
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study.										
Major Courses		18 hours								
	ART	103 Intro to 2D Design (3)				Other Recommended Courses				
	ART	104 Intro to 3D Deisgn (3)				ART	105 Topics in Art (1-3)			
	ART	106 Drawing I (3)				ART	189 Photography (3)			
	ART	107 Painting I (3)				ART	205 Topics in Art (1-3)			
	OR	ART 119 Printmaking I (3)				ART	206 Drawing II* (3)			
	ART	110 Ceramics I (3)				ART	207 Painting II* (3)			
	ART	111 Sculpture I (3)				ART	210 Ceramics II* (3)			
						ART	211 Sculpture II* (3)			
						ART	219 Printmaking II* (3)			
Required Online Course		0 hour								
	CVCS	101 MO Higher Ed Civics Exam								

Automotive Technology: Basic Engines Certificate

Automotive Technology: Basic Auto Mechanic Certificate

Automotive Technology AAS

The Automotive Technology program is aimed at training students in the maintenance and repair of today's modern, complex vehicles. Successful automotive graduates can expect to find employment in the automotive service industry as technicians, parts managers, service managers, or in sales positions.

The Basic Engines certificate prepares students to enter a career in Automotive Technology with a basic skill set that will provide entry level knowledge of automotive engine systems. The students will be introduced to Engine air/fuel requirements, electronic engine management, and electronic fuel injection. This program will cover the accepted methods of service and repair of the engine and related systems, and the emission control systems. Automotive heating and air conditioning principles will be covered during this course of study.

The Basic Auto Mechanic certificate prepares students to enter a career in Automotive Technology with entry level skill set as a basic auto mechanic. The students will be introduced to the basic principles of automotive electrical systems, braking systems, power transmitting units, computerized engine control systems, and diagnostics and repairs of the automotive suspension and steering systems.

Program of Study

Basic Engines Certificate Courses		18 hours
AUTO	114 Auto Fuel Systems (4)	
AUTO	115 Engine Repair (5)	
AUTO	214 Auto Air Conditioning (4)	
AUTO	215 Auto Emission Cont Sys (5)	
Basic Auto Mechanic Certificate Courses		21 hours
AUTO	124 Auto Brake Systems (4)	
AUTO	125 Auto Electrical Systems (5)	
AUTO	223 Auto Power Train Sys (3)	
AUTO	224 Computer Engine Control (4)	
AUTO	225 Auto Suspension and Steering (5)	
Orientation		2 hours
COLL	105 Technical Career Development I (1)	
COLL	106 Technical Career Development II (1)	
Communications		9 hours
Written Communications (6 hours)		
ENGL	101*	
ENGL	102*	
ENGL	203*	
Oral Communications (3 hours)		
COMM	104*	
Mathematics		3 hours
BSAD	121*	
MATH	104*	
Civics		3 hours
HIST	106*, 107*	
PLSC	103*	
AAS Technical Courses		6 hours
BSAD	115 Computer Concepts (3) – OR – BSAD 125	
BSAD	150 Intro to Business (3)	
Required Online Course		0 hour
CVCS	101 Missouri Higher Ed Civics Examination	

Suggested Plan of Study

FIRST YEAR		
Fall Semester		Hours
AUTO	114 Fuel Systems	4
AUTO	115 Engine Repair	5
AUTO	214 Air Conditioning	4
AUTO	215 Emission Control Systems	5
TOTAL		18
Graduate with Basic Engines Certificate		
Spring Semester		Hours
AUTO	124 Brakes	4
AUTO	125 Electrical Systems	5
AUTO	223 Power Trains	3
AUTO	224 Computer Engine Control	4
AUTO	225 Suspension and Steering	5
TOTAL		21
Graduate with Basic Auto Mechanic Certificate		
SECOND YEAR		
Fall Semester		Hours
BSAD	115 Comp Concepts – OR – BSAD 125	3
COMM	104 Fundamentals of Speech	3
Approved Mathematics Course		3
Approved Written Communications Course		3
TOTAL		12
Spring Semester		Hours
BSAD	150 Intro to Business	3
Approved Civics Course		3
Approved Written Communications Course		3
COLL	105 Technical Career Development I	1
COLL	106 Technical Career Development II	1
TOTAL		11
Graduate with Auto Technology AAS		
Total Engines CERTIFICATE Hours Required		18
Additional Hours Needed for Mechanic Cert		21
Additional Hrs Needed for Auto Tech AAS		23
Total Auto Tech AAS Hours Required		62

* Prerequisite requirement

Courses for Certificate	
Additional Courses for AAS Degree	



CERTIFICATE Automotive Technology: Basic Engines

Done Curr To do

Done Curr To do

Major Courses		18 hours							
AUTO	114 Auto Fuel Systems (4)								
AUTO	115 Engine Repair (5)								
AUTO	214 Auto Air Conditioning (4)								
AUTO	215 Auto Emission Cont Sys (5)								



CERTIFICATE Automotive Technology: Basic Auto Mechanic

Done Curr To do

Done Curr To do

Major Courses		39 hours							
AUTO	114 Auto Fuel Systems (4)								
AUTO	115 Engine Repair (5)								
AUTO	124 Auto Brake Systems (4)								
AUTO	125 Auto Electrical Systems (5)								
AUTO	214 Auto Air Conditioning (4)								
AUTO	215 Auto Emission Cont Sys (5)								
AUTO	223 Auto Power Train Sys (3)								
AUTO	224 Computer Engine Cont (4)								
AUTO	225 Auto Suspen and Steer (5)								



ASSOCIATE OF APPLIED SCIENCE DEGREE Auto Technology

Done Curr To do

Done Curr To do

Orientation		2 hours				62 total hours			
COLL	105 Technical Career Dev I (1)								
COLL	106 Technical Career Dev II (1)								
Communications		9 hours							
Written Communications (6 hours)						Oral Communications (3 hours)			
ENGL	101*					COMM	104*		
ENGL	102*								
ENGL	203*								
Mathematics		3 hours							
BSAD	121*					MATH	104*		
Civics		3 hours							
HIST	106*					PLSC	103*		
HIST	107*								
Technical Core		45 hours							
AUTO	114 Auto Fuel Systems (4)					AUTO	223 Auto Power Train Sys (3)		
AUTO	115 Engine Repair (5)					AUTO	224 Computer Engine Cont (4)		
AUTO	124 Auto Brake Systems (4)					AUTO	225 Auto Suspen and Steer (5)		
AUTO	125 Auto Electrical Systems (5)					BSAD	115 Computer Concepts (3)		
AUTO	214 Auto Air Conditioning (4)					OR	BSAD 125 Computer Apps (3)		
AUTO	215 Auto Emission Cont Sys (5)					BSAD	150 Intro to Business (3)		
Required Online Course		0 hour							
CVCS	101 Missouri Higher Ed Civics Exam								

Behavior Technician Certificate

Psychology: Autism Option AA

Emphasis in this certificate program will be placed on Applied Behavior Analysis (ABA) theories and techniques to work with individuals diagnosed with Autism and/or developmental disabilities. Students may pursue an AA in Preschool/Paraprofessional, Psychology, General Studies or an AAT. Students are required to successfully complete a portfolio in PSYC 290 to complete this certificate program. Career opportunities for Psychology-Autism Option majors include social work, education and counseling. After completion of a baccalaureate degree, graduates often find themselves working one-on-one with children with autism in the academic or health care setting. An Associate of Arts of Psychology-Autism Option requires completion of the general education core, fifteen hours in psychology, and EDUC 204.

Program of Study

Certificate Courses		19 hours
COLL	101 College Orientation	
EDUC	231* Educational Psychology (3) ±	
PSYC	101 General Psychology (3)	
PSYC	203 Autism Spectrum Disorders (3)	
PSYC	204 Applied Behavior Analysis for Educators (3)	
PSYC	211* Lifespan Development (3)	
PSYC	290* Clinical I – Supervised Field Experience (3)	
Communications		9 hours
Written Communications (6 hours)		
ENGL	101*	
ENGL	102*	
Oral Communications (3 hours)		
COMM	104*	
Humanities		9 hours
Students should select classes from two different disciplines (prefixes)		
ART	101, 106	HIST 101*, 102*
ASL	101, 102*	MUSC 101
ENGL	109*, 222*, 225*	PHIL 101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN 101, 102*
FREN	101	TA 205
Mathematics		3 hours
MATH	125*, 130*, 135*#	
Science		7 hours
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab		
Lab		Non-Lab
BIOL	101, 110, 120	PHYS 105
BIOL	152*	
CHEM	101, 104, 111*	
GEOL	115, 210*#	
PHYS	101, 190*	
Social and Behavioral Science		9 hours
Students should select classes from two different disciplines (prefixes)		
Civics (3 hrs)		Additional 6 Hours
HIST	106*, 107*	ECON 201*, 202*
PLSC	103*, 104*	GEOG 111
		SOC 101
GE CORE Electives		5 hours
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study		
Major Courses		3 hours
EDUC	125	
Required Online Course		0 hour
CVCS	101 Missouri Higher Ed Civics Examination	

Suggested Plan of Study

FIRST YEAR

Fall Semester	Hours
COLL 101 College Orientation	1
EDUC 125 Introduction to Education	3
ENGL 101 English Composition I (for AA)	3
PSYC 101 General Psychology	3
PSYC 203 Autism Spec. Disorders	3
PSYC 204 Applied Behavior Analysis	3
TOTAL	16

Spring Semester	Hours
EDUC 231 Educational Psychology	3
ENGL 102 English Composition II (for AA)	3
PSYC 211 Lifespan Development	3
PSYC 290 Clinical I	3
Approved GE Core Elective	2
Approved Humanities Course (for AA)	3
TOTAL	17

Graduate with Behavior Technician Certificate

SECOND YEAR

Fall Semester	Hours
MATH 135 Algebra for Calculus	3
Approved Civics Course	3
Approved GE Core Elective	3
Approved Science Course	3-5
Approved Social & Behavioral Science Course	3
TOTAL	15-17

Spring Semester	Hours
COMM 104 Fundamentals of Speech	3
Approved Humanities Course	3
Approved Humanities Course	3
Approved Science Course	3-5
Approved Social & Behavioral Science Course	3
TOTAL	15-17

TOTAL HOURS REQUIRED 63-67

*Prerequisite required

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

- Preferred class for this degree option

± - Not required for AA degree

Courses for Certificate	
Additional Courses for AA Degree	



CERTIFICATE Behavior Technician Certificate

				Done	Curr	To do					Done	Curr	To do		
Orientation				1 hour											
COLL	101	College Orientation		_____	_____	_____					_____	_____	_____		
Major Courses				18 hours											
EDUC	231	Educational Psychology* (3)		_____	_____	_____									
PSYC	101	General Psychology (3)		_____	_____	_____									
PSYC	203	Autism Spectrum Disorders (3)		_____	_____	_____									
PSYC	204	ABA for Educators (3)		_____	_____	_____									
PSYC	211	Lifespan Development* (3)		_____	_____	_____									
PSYC	290	Clinical I - Supervised Field Exp* (3)		_____	_____	_____									

ASSOCIATE OF ARTS DEGREE											
Psychology: Autism Option											
General Education Core					Done	Curr	To do		Done	Curr	To do
Orientation		1 hour							61 hours		
	COLL	101									
Communications		9 hours									
	Written Communications (6 hours)						Oral Communications (3 hours)				
	ENGL	101*					COMM	104*			
	ENGL	102*, 104*									
Humanities		9 hours									
	ART	101, 106					HIST	101*, 102*			
	ASL	101, 102*					MUSC	101			
	ENGL	109*, 222*, 225*					PHIL	101*, 121, 201*, 202*			
	ENGL	230*, 235*, 240*, 245*					SPAN	101, 102*			
	FREN	101					TA	205			
Mathematics		3 hours									
	MATH	135* (Recommended)					MATH	125*, 130*			
Science		7 hours									
	Lab						Non-Lab				
	BIOL	101, 110, 120					PHYS	105			
	BIOL	152*									
	CHEM	101, 104, 111*									
	GEOL	115, 210*									
	PHYS	101, 190*									
Social and Behavioral Science		9 hours									
	Civics (3 hours)										
	HIST	106*					ECON	201*, 202*			
	HIST	107*					GEOG	111			
	PLSC	103*, 104*					SOC	101			
GE Core Electives		5 hours									
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study.											
Major Courses		18 hours									
	EDUC	125 Introduction to Education (3)					PSYC	204 Applied Behavior Anal (3)			
	PSYC	101 General Psych (3)					PSYC	211 Lifespan Development* (3)			
	PSYC	203 Autism Spectrum Disorders (3)					PSYC	290 Clinical I* (3)			
Required Online Course		0 hour									
	CVCS	101 MO Higher Ed Civics Exam									

Biology AA

Biologists are teachers in high schools, colleges, and universities. They also work as conservationists, nutritionists, laboratory technicians, foresters, rangers, sanitarians, marine biologists, and geneticists. Their working environment has as much variation as any career field: classrooms, laboratories, forests, national or state parks, state or municipal offices, agricultural research stations, oceanographic vessels, museums, zoos, greenhouses, medical laboratories, hospitals, deserts, tropical rain forests, or even the cold of the arctic regions. Biologically related jobs are predicted to increase much faster than most of the job market in the future. With recent advances in genetic research, many new doors are opening for biologists in such areas as medicine, synthesizing scarce biological molecules, and finding new food and energy sources.

Program of Study

Orientation		1 hour
COLL 101		
Communications		9 hours
Written Communications (6 hours)		
ENGL 101*		
ENGL 102*		
Oral Communications (3 hours)		
COMM 104*		
Humanities		9 hours
Students should select classes from two different disciplines (prefixes)		
ART 101, 106	HIST 101*, 102*	
ASL 101, 102*	MUSC 101	
ENGL 109*, 222*, 225*	PHIL 101*, 121, 201*, 202*	
ENGL 230*, 235*, 240*, 245*	SPAN 101, 102*	
FREN 101	TA 205	
Mathematics		3 hours
MATH 135*#		
Science		9 hours
Lab		Non-Lab
BIOL 101# or 110*	BIOL 102	
CHEM 111*#	PHYS 102	
Social and Behavioral Science		9 hours
Students should select classes from two different disciplines (prefixes)		
Civics (3 hours)		
HIST 106*, 107*	ECON 201*, 202*	
PLSC 103*	GEOG 111	
	PSYC 101, 211*	
	SOC 101	
GE CORE Electives		5 hours
<i>BIOL 110 should be used to satisfy the additional 5 credit hours elective requirement. Courses cannot be used as Core electives if counted under another section of this Program of Study.</i>		
Major Courses		10 hours
BIOL 120*	CHEM 112*	
Approved Electives		5 hours
BIOL 220*	MATH 150*	
CHEM 201*	MATH 160*	
CHEM 221*		
Required Online Course		0 hour
CVCS 101 Missouri Higher Ed Civics Examination		

Suggested Plan of Study

FIRST YEAR

Fall Semester	Hours
BIOL 101 Biology	4
COLL 101 College Orientation	1
ENGL 101 English Composition	3
MATH 135 Algebra for Calculus	3
Approved Soc & Behavioral Science Course	3
TOTAL	14

Spring Semester	Hours
BIOL 120 – OR – Approved Elective	5
ENGL 102 Advanced English Comp	3
Approved Civics Course	3
Approved Humanities Course	3
TOTAL	14

SECOND YEAR

Fall Semester	Hours
BIOL 110 General Zoology	5
CHEM 111 General Chemistry I	5
Approved Humanities Course	3
Approved Soc & Behavioral Science Course	3
TOTAL	16

Spring Semester	Hours
BIOL 120 – OR – Approved Elective	5
CHEM 112 General Chemistry II	5
COMM 104 Fundamentals of Speech	3
Approved Humanities Course	3
TOTAL	16

TOTAL HOURS REQUIRED 60

*Prerequisite required

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

- Preferred class for this degree option



ASSOCIATE OF ARTS DEGREE

Biology

General Education Core			Done	Curr	To do				Done	Curr	To do
Orientation			1 hour						60 hours		
	COLL	101									
Communications			9 hours								
	Written Communications (6 hours)						Oral Communications (3 hours)				
	ENGL	101*					COMM	104*			
	ENGL	102*, 104*									
Humanities			9 hours								
	ART	101, 106					HIST	101*, 102*			
	ASL	101, 102*					MUSC	101			
	ENGL	109*, 222*, 225*					PHIL	101*, 121, 201*, 202*			
	ENGL	230*, 235*, 240*, 245*					SPAN	101, 102*			
	FREN	101					TA	205			
Mathematics			3 hours			Math Electives for GE Core					
	MATH	135* (Recommended)					MATH	130*			
Science			9 hours								
	Lab						Non-Lab				
	BIOL	101 (Required) or 110*					BIOL	102			
	CHEM	111* (Required)					PHYS	102			
Social and Behavioral Science			9 hours								
	Civics (3 hours)										
	HIST	106*					ECON	201*, 202*			
	HIST	107*					GEOG	111			
	PLSC	103*, 104*					PSYC	101, 211*			
							SOC	101			
GE Core Electives			5 hours								
							BIOL	110 General Zoology (5)			
Major Courses			10 hours			Approved Electives 5 hours					
	BIOL	120 Gen Botany* (5)					BIOL	220 Gen Microbiology* (5)			
	CHEM	112 General Chem II* (5)					CHEM	201 Quant. Analysis* (5)			
							CHEM	221 Organic & Biochemistry* (5)			
							MATH	150 Calculus 1 Part I* (2)			
							MATH	160 Calculus I Part II* (3)			
Required Online Course			0 hour								
	CVCS	101 MO Higher Ed Civics Exam									

ASSOCIATE OF ARTS DEGREE

Business Administration AA

Business Administration at Crowder prepares the business-oriented student for transfer to a four-year business, marketing, accounting, economics or finance program. Business Administration provides a core of general education courses plus specific business courses equivalent to those found in any first and second year business program. The following program is suggested for students intending to transfer following graduation. For best transfer, contact with the senior institution should be made as early in the program as possible.

Program of Study

Orientation		1 hour	
COLL	101		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		3 hours	
MATH	125*#, 130*, 135*#		
Science		7 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
Lab		Non-Lab	
BIOL	101, 110, 120	BIOL	102
BIOL	152*	PHYS	102
CHEM	101, 104, 111*	PHYS	105
GEOL	115, 210*		
PHYS	101, 190*		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Civics (3 hours)			
HIST	106*, 107*	ECON	201* (Required)
PLSC	103*	PSYC	101#
GE CORE Electives		5 hours	
ECON 202—Required			
Students should meet the five-hour requirement by selecting from ECON 202 and any other courses listed above or from GEOG 111, PSYC 211, or SOC 101; however courses can only be counted on one category and not be counted under two categories.			
Major Courses		12 hours	
ACCT	201	BSAD	125
ACCT	202*	BSAD	150
Approved Electives		6 hours	
Courses must be approved from the Business Department. Prefixes will be ACCT, BMGT, or BSAD.			
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

- Preferred class for this degree option

Suggested Plan of Study

FIRST YEAR

Fall Semester		Hours	
BSAD 150	Introduction to Business		3
BSAD 125	Computer Applications		3
COLL 101	College Orientation		1
COMM 104	Fundamentals of Speech		3
ENGL 101	English Composition I		3
	Approved Mathematics Course		3
TOTAL			16

Spring Semester		Hours	
ENGL 102	English Composition II		3
PSYC 101	General Psychology		3
	Approved Business Elective		3
	Approved Civics Course		3
	Approved Science Course		3-5
TOTAL			17

SECOND YEAR

Fall Semester		Hours	
ACCT 201	Principles of Accounting I		3
ECON 201	Principles of Macroeconomics*		3
	Approved GE Core Elective		2-3
	Approved Humanities Course		3
	Approved Science Course		3-5
TOTAL			14-15

Spring Semester		Hours	
ACCT 202	Principles of Accounting II		3
ECON 202	Principles of Microeconomics*		3
	Approved Business Elective		3
	Approved Humanities Course		3
	Approved Humanities Course		3
TOTAL			15

TOTAL HOURS REQUIRED 62-63

*Prerequisite required

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ASSOCIATE OF ARTS DEGREE

Business Administration

General Education Core			Done	Curr	To do		Done	Curr	To do
Orientation			1 hour				61 hours		
	COLL	101							
Communications			9 hours						
	Written Communications (6 hours)						Oral Communications (3 hours)		
	ENGL	101*					COMM	104*	
	ENGL	102*, 104*							
Humanities			9 hours						
	ART	101, 106					HIST	101*, 102*	
	ASL	101, 102*					MUSC	101	
	ENGL	109*, 222*, 225*					PHIL	101*, 121, 201*, 202*	
	ENGL	230*, 235*, 240*, 245*					SPAN	101, 102*	
	FREN	101					TA	205	
Mathematics			3 hours						
	MATH	125* or 135* (Recommended)					MATH	130*	
Science			7 hours						
	Lab						Non-Lab		
	BIOL	101, 110, 120					BIOL	102	
	BIOL	152*					PHYS	102	
	CHEM	101, 104, 111*					PHYS	105	
	GEOL	115, 210*							
	PHYS	101, 190*							
Social and Behavioral Science			9 hours						
	Civics (3 hours)								
	HIST	106*					ECON	201* (Required)	
	HIST	107*					PSYC	101 (Recommended)	
	PLSC	103*, 104*							
GE Core Electives			5 hours						
Students should meet the 5 hour requirement by selecting from ECON 202 and any other courses listed above or from GEOG 111, PSYC 211, or SOC 101; however, courses cannot be used as Core electives if counted under another section of this Program of Study.							ECON	202* (Required)	
Major Courses			12 hours						
	ACCT	201 Prin of Account I (3)					Approved Electives 6 hours		
	ACCT	202 Prin of Account II* (3)					Courses must be approved and from the		
	BSAD	125 Computer Apps (3)					Business Department. Prefixes will be		
	BSAD	150 Intro to Business (3)					ACCT, BMGT, or BSAD.		
Required Online Course			0 hour						
	CVCS	101 MO Higher Ed Civics Exam							

Business: Accounting Option AAS

This program is designed for students who seek immediate employment in the field of accounting and for those presently employed in accounting careers and desiring advancement. Crowder's Associate of Applied Science in Accounting degree gives students an advantage in the business world by training them in the latest accounting and computer techniques. Students learn how to solve problems using today's technology. This program focuses on the principles, procedures, and theories of managing and preparing financial records.

*All students pursuing this degree must take and pass the approved Technical Skills Assessment (TSA) prior to graduating. A fee will be charged.

Program of Study

Orientation		1 hour	
COLL	101		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Mathematics		3 hours	
MATH	125*	MATH	135*
Civics		3 hours	
HIST	106*, 107*		
PLSC	103*		
Business Core		23 hours	
ACCT	201 (3)	BSAD	130* (3)
ACCT	202* (3)	BSAD	218* (3)
BSAD	103 (2)	BSAD	230 (3)
BSAD	125 (3)	ECON	201* (3)
Accounting Core		18 hours	
		BSAD	150 (3) OR
ACCT	160 (3)	BMGT	175 (3)
		ECON	202* (3)
ACCT	165* (3)		
ACCT	245 (3)		
ACCT	250* (3) (spring only)		
Electives		3 hours	
Electives can be taken from ACCT, BSAD, or BMGT			
Required Online Course		0 hours	
CVCS	101 Missouri Higher Ed Civics Examination		

* Prerequisite requirement

Suggested Plan of Study**FIRST YEAR**

Fall Semester		Hours
ACCT	201 Principles of Accounting I	3
BSAD	125 Computer Applications	3
COLL	101 College Orientation	1
COMM	104 Fundamentals of Speech	3
ENGL	101 English Composition I	3
	Approved Mathematics Course	3
TOTAL		16

Spring Semester		Hours
ACCT	202 Principles of Accounting II	3
BSAD	130 Business Communications	3
BSAD	150 – OR – BMGT 175	3
BSAD	218 Advanced Excel (Spring only)	3
ENGL	102 English Composition II	3
TOTAL		15

SECOND YEAR

Fall Semester		Hours
ACCT	165 QuickBooks (Fall only)	3
ACCT	245 Tax Accounting (Fall only)	3
ECON	201 Principles of Macroeconomics	3
	Approved Business Elective	3
	Approved Civics Course	3
TOTAL		15

Spring Semester		Hours
ACCT	160 Payroll Accounting (Spring only)	3
ACCT	250 Certified Bookkeeper Rev	3
BSAD	103 Professional Development	2
BSAD	230 Business Law	3
ECON	202 Principles of Microeconomics	3
TOTAL		14

TOTAL HOURS REQUIRED 60

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

Business: Management Option AAS

This program is designed to help students develop the business prowess and managerial "know-how" to become valuable assets to any company. Crowder's Associate of Applied Science in Management degree offers specialized instruction in accounting and finance, business law & economics, management, marketing and human resources. Students learn how to develop vital skills for administration and management including problem-solving, strategy & planning, communication & marketing, interpersonal relations and technology. Special emphasis is placed on preparing students for the challenges of management positions through active learning techniques, practical application of research methods, team projects, presentations and real-world internships.

*All students pursuing this degree must take and pass the approved Technical Skills Assessment (TSA) prior to graduating. A fee will be charged.

Program of Study

Orientation		1 hour
COLL	101	
Communications		9 hours
Written Communications (6 hours)		
ENGL	101*, 102* or 203*	
Oral Communications (3 hours)		
COMM	104*	
Mathematics		3 hours
BSAD	121	
Civics		3 hours
HIST	106*, 107*	
PLSC	103*	
Business Core		23 hours
ACCT	201 (3)	
ACCT	202* (3)	
BSAD	103 (2)	
BSAD	125 (3)	
BSAD	130* (3)	
BSAD	218* (3)	
BSAD	230 (3)	
ECON	201* (3)	
Management Core		21 hours
BMGT	115 (3)	BSAD 108 (3)
BMGT	175 (3)	BSAD 150 (3)
BMGT	200 (3)	
BMGT	223 (3)	
BMGT	285* (3)	
Required Online Course		0 hour
CVCS	101 Missouri Higher Ed Civics Examination	

Suggested Plan of Study

FIRST YEAR			
Fall Semester			Hours
BMGT 115	Customer Service		3
BSAD 121	Business Math		3
BSAD 125	Computer Applications		3
BSAD 150	Introduction to Business		3
COLL 101	College Orientation		1
ENGL 101	English Composition I		3
TOTAL			16
Spring Semester			Hours
BMGT 175	Management		3
BSAD 218	Advanced Excel (Spring only)		3
BSAD 230	Business Law		3
COMM 104	Fundamentals of Speech		3
ENGL 203	Technical Report Writing OR ENGL 102		3
TOTAL			15
SECOND YEAR			
Fall Semester			Hours
ACCT 201	Principles of Accounting I		3
BMGT 200	Marketing		3
BMGT 223	Business Ethics (Fall Only)		3
BSAD 108	Personal Finance		3
Approved Civics Course			3
TOTAL			15
Spring Semester			Hours
ACCT 202	Principles of Accounting II		3
BMGT 285	Human Res Mgmt (Spring only)		3
BSAD 103	Professional Development		2
BSAD 130	Business Communications		3
ECON 201	Principles of Macroeconomics		3
TOTAL			14
TOTAL HOURS REQUIRED			60

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

*Prerequisite requirement



ASSOCIATE OF APPLIED SCIENCE DEGREE

Business: Management Option

			Done	Curr	To Do			Done	Curr	To Do
Orientation			1 hour			60 hours				
	COLL	101								
Communications			9 hours							
	Written Communications (6 hours)					Oral Communications (3 hours)				
	ENGL	101*, 102* or 203*				COMM	104*			
Mathematics			3 hours							
	BSAD	121								
Civics			3 hours							
	HIST	106*				PLSC	103*, 104*			
	HIST	107*								
Business Core			23 Hours			Management Core			21 Hours	
	ACCT	201 Principles of Accounting I (3)								
	ACCT	202 Principles of Acctg II* (3)				BMGT	115 Customer Service (3)			
	BSAD	103 Professional Dev (2)				BMGT	175 Management (3)			
	BSAD	125 Computer Apps (3)				BMGT	200 Marketing (3)			
	BSAD	130 Bus Communications* (3)				BMGT	223 Business Ethics (3)			
	BSAD	218 Spreadsheets* (3)				BMGT	285 Human Resource Mgmt* (3)			
	BSAD	230 Business Law (3)				BSAD	108 Personal Finance (3)			
	ECON	201 Prin of Macroeconomics (3)				BSAD	150 Intro to Business (3)			
Required Online Course			0 hour							
	CVCS	101 Missouri Higher Ed Civics Exam								

Certified Medical Assistant Certificate

This certification program prepares students for employment as a Certified Medical Assistant with the skills needed for placement in health care setting such as a hospital, clinic, or doctor office; and the students have a career path into the Certified Medical Assistant AAS.

Program of Study

Certificate Courses			16 hours
MEDA	111	Introduction to Medical Assisting (3)	
MEDA	112	Mathematical App & Med Administration (2)	
MEDA	113*	Medical Assisting Science (3)	
MEDA	114*	Clinical Medical Assisting (3)	
MEDA	115*	Administrative Medical Assisting I (2)	
MEDA	116	Medical Assisting Internship (3)	

*Prerequisite requirement

Suggested Plan of Study

			FIRST YEAR	
Fall Semester				Hours
MEDA	111	Intro to Medical Assisting		3
MEDA	112	Math Application & Med Administration		2
MEDA	113	Medical Assisting Science		3
MEDA	114	Clinical Medical Assisting		3
MEDA	115	Administrative Medical Assisting		2
MEDA	116	Medical Assisting Internship		3
			TOTAL	16

Graduate with Certified Medical Assistance Certificate

Total CERTIFICATE Hours Required 16



CERTIFICATE

Certified Medical Assistant

Students must earn 16 hours for this certificate.

			Done	Curr	To do					
Certificate Courses		16 hours								
	MEDA	111 Intro to Medical Assisting (3)								
	MEDA	112 Mathematical App & Med Administration (2)								
	MEDA	113 Medical Assisting Science* (3)								
	MEDA	114 Clinical Medical Assisting* (3)								
	MEDA	115 Administrative Medical Assisting* (2)								
	MEDA	116 Medical Assisting Internship (3)								

Chemistry AA

Instruction in the Physical Sciences is offered in the areas of chemistry, physics, geology and astronomy as the foundation for baccalaureate and graduate studies in these and related sciences at a university or four-year college. Physical Science students find employment in industrial research and development, government regulatory agencies, or secondary and post-secondary education. The suggested curriculum that follows assumes a mathematics background that will permit an enrollment in the calculus series as a freshman. If pre-calculus classes are needed, more than four semesters are necessary to complete this program.

Program of Study

Orientation		1 hour	
COLL	101		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		5 hours	
MATH	150* & 160*		
Science		10 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
Lab		Non-Lab	
BIOL	101#, 110, 120	BIOL	102
CHEM	111* (Required)	PHYS	102
PHYS	190* (Required)	PHYS	105
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Civics (3 hours)			
HIST	106*, 107*	ECON	201*, 202*
PLSC	103*	GEOG	111
		PSYC	101, 211*
		SOC	101
GE CORE Electives		5 hours	
PHYS 190 or BIOL 101 should be used to satisfy the 5 credit hours elective requirement. Courses cannot be used as Core electives if counted under another section of this Program of Study.			
Major Courses		15 hours	
CHEM	112*	PHYS	210*
MATH	201*		
Other Recommended Courses			
CHEM	201*	COMP	111*
CHEM	221*	MATH	202*
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

- Preferred class for this degree option

Suggested Plan of Study

FIRST YEAR

Fall Semester		Hours
CHEM	111 General Chemistry I	5
COLL	101 College Orientation	1
COMM	104 Fundamentals of Speech	3
ENGL	101 English Composition I	3
MATH	150 Calculus I, Part 1	2
Approved Civics Course		3
TOTAL		17

Spring Semester		Hours
CHEM	112 General Chemistry II	5
ENGL	102 English Composition II	3
MATH	160 Calculus I, Part 2	3
PHYS	190 General Physics I	5
TOTAL		16

SECOND YEAR

Fall Semester		Hours
MATH	201 Calculus II	5
PHYS	210 General Physics II	5
Approved Humanities Course		3
Approved Soc & Behavioral Science Course		3
TOTAL		16

Spring Semester		Hours
BIOL	101 General Biology	4
Approved Humanities Course		3
Approved Humanities Course		3
Approved Soc & Behavioral Science Course		3
TOTAL		13

TOTAL HOURS REQUIRED 62

*Prerequisite required

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.



ASSOCIATE OF ARTS DEGREE

Chemistry

General Education Core			Done	Curr	To do			Done	Curr	To do
Orientation		1 hour					62 hours			
	COLL	101								
Communications		9 hours								
		Written Communications (6 hours)					Oral Communications (3 hours)			
	ENGL	101*					COMM	104*		
	ENGL	102*, 104*								
Humanities		9 hours								
	ART	101, 106					HIST	101*, 102*		
	ASL	101, 102*					MUSC	101		
	ENGL	109*, 222*, 225*					PHIL	101*, 121, 201*, 202*		
	ENGL	230*, 235*, 240*, 245*					SPAN	101, 102*		
	FREN	101					TA	205		
Mathematics		5 hours								
	MATH	150* & 160*						130*		
Science		10 hours								
	Lab						Non-Lab			
	BIOL	101#, 110, 120					BIOL	102		
	CHEM	101, 104					PHYS	102		
	CHEM	111* (Required)					PHYS	105		
	PHYS	190* (Required)								
Social and Behavioral Science		9 hours								
		Civics (3 hours)								
	HIST	106*					ECON	201*, 202*		
	HIST	107*					GEOG	111		
	PLSC	103*, 104*					PSYC	101, 211*		
							SOC	101		
GE Core Electives		5 hours								
							PHYS	190 Gen Physics I* (5)		
							BIOL	101 General Biology (5)		
Major Courses		15 hours					Other Recommended Courses			
	CHEM	112 General Chem II* (5)					CHEM	201 Quant Analysis* (5)		
	MATH	201 Calculus II* (5)					CHEM	221 Organic Chem (5)		
	PHYS	210 Gen Physics II* (5)					COMP	111 Intro to Comp Science* (4)		
							MATH	202 Calculus III* (5)		
Required Online Course		0 hour								
	CVCS	101 MO Higher Ed Civics Exam								

CERTIFICATE TO AAS

PCR/ CN/ ITCT/C/CNS

CNS: PC Repair Certificate

CNS: Cisco Networking Certificate

CNS: Information Technology Certificate

CNS: Coding Certificate

CNS: Computer and Network Support Technology AAS

The Computer and Network Support Technology program (CNS) prepares students for employment as support personnel in the areas of computer and information services. Students successfully completing this program will be able to setup and maintain microcomputer systems as well as perform basic administrative/ maintenance tasks in a networked computing environment. The **PC Repair Certificate** provides an opportunity for students to acquire the basic computer assembly/maintenance/setup skills required for entry-level employment in the information technology/services area. Successful graduates will be able to utilize industry terminology, assemble, setup, and maintain Intel-based ("IBM compatible") personal computers, and perform basic computer networking tasks. The program is based around two PC basics courses taught in a strong "hands-on" environment in the classroom. Students successfully completing the program will be qualified to complete and pass CompTIA's A+ PC repair exams; although passing the exam is a formal requirement for obtaining the certificate. The **IT Certificate** prepares students to enter a career in Information Technology with a basic skill set that will provide entry level knowledge of basic network administration using the Microsoft Windows family of server operating systems. The Computer Network classes will provide general and advanced training in Microsoft servers, security and administration as they are used in the current industry. The **Cisco certificate** provides an opportunity for students acquire the basic computer networking infrastructure skills required for entry-level employment in the information technology/services area. Successful graduates will be able to utilize industry terminology, setup/maintain infrastructure components of both local and wide-area computer networks, and recognize/mitigate common network security threats. The program is built around three basic internetworking courses provided online by Cisco Services and taught in Crowder's classroom by a Cisco-certified instructor. Students successfully completing the program will be qualified to complete and pass Cisco's CCNA (Certified Cisco Network Administrator) exam, although passing the CCNA exam is not a requirement for obtaining the certificate. The **Coding Certificate** is for students interested in learning coding languages. Courses focus on coding in the context of gaming and app development. Computer languages include Python, C++, and DirectX programming.

Program of Study

PC Repair Technical Courses				15 hours
CNS	101	Introduction to Electronics (3)		
CNS	111	PC Basics I (3)		
CNS	112*	PC Basics II (3)		
CNS	113*	Introduction to Networks (3)		
CNS	149*	Cybersecurity I (3)		
Information Technology Courses				12 hours
CNS	122	VMWare: Install, Configure, Man (3)		
CNS	275	Advanced MS Server* (3) [Elective for AAS]		
CNS	Approved Electives (6)			
Cisco Networking Certificate				6 hours
CNS	114*	Network Switching and Routing Ess. (3)		
CNS	251*	CCNA Ent Net., Security & Automation (3)		
Coding Certificate				15 hours
CNS	126	Game Development/Phython (3)		
CNS	131*	Intro to Gaming/Programming (3)		
CNS	141*	Programming for Gaming (3)		
CNS	Approved Electives (6)			
Orientation				2 hours
COLL	105	Technical Career Development I (1)		
COLL	106	Technical Career Development II (1)		
Communications				9 hours
Written Communications (6 hours)				
ENGL	101*	ENGL 203*		
ENGL	102*			
Oral Communications (3 hours)				
COMM	104*			
Mathematics				3 hours
MATH	104*	MATH	135*	
Civics				3 hours
HIST	106*, 107*	PLSC	103*	
Required Courses				7 hours
BSAD	125	Computer App		
CNS	285*	CNS Internship (4)		
CNS Electives				6 hours
CNS	122	VMWare: Install, Configure, Manage (3)		
CNS	149*	Cybersecurity I (3)		
CNS	222	VmWare: Optimize & Scale (3)		
CNS	249*	Cybersecurity II (3)		
CNS	250	Linux Network Admin (3)		
CNS	259*	Intro to PowerShell*)3)		
CNS	275*	Advanced MS Server (3)		
Required Online Course				0 hour
CVCS	101	Missouri Higher Ed Civics Examination		103 V1.

Suggested Plan of Study FIRST YEAR

Fall Semester			Hours
CNS	101	Introduction to Electronics	3
CNS	111	PC Basics I	3
CNS	112	PC Basics II	3
CNS	113	Introduction to Networks	3
CNS	149	Cybersecurity I	3
COLL	105	Technical Career Development I	1
COLL	106	Technical Career Development II	1
TOTAL			17

Graduate with PC Repair Certificate

Spring Semester			Hours
CNS	114	Network Switching and Routing Essen	3
CNS	122	VmWare VSphere: Install, Config, Man	3
CNS	222	VmWare VSphere: Optimize and Scale	3
CNS	249	Cybersecurity II	3
CNS	275	Advanced Microsoft Server	3
TOTAL			15

Graduate with Information Technology Certificate

SECOND YEAR

Fall Semester			Hours
BSAD	125	Computer Applications	3
COMM	104	Fundamentals of Speech	3
CNS	251	CCNA Ent Net, Sec & Auto	3
Approved Mathematics Course			3
Approved Written Communications Course			3
TOTAL			15

Spring Semester			Hours
CNS	285	CNS Internship	4
Approved Elective			3
Approved Civics Course			3
Approved Written Communications Course			3
TOTAL			13

Graduate with Cisco Certificate

Graduate with CNS Technology AAS

Total PC Repair Certificate Hours Required	17
Additional Hours Needed for IT Certificate	12
Additional Hours Needed for Cisco Certificate	6
Additional Hours Needed for Coding Certificate	15
Additional Hours Needed for AAS	10
Total AAS Hours Required	60

* Prerequisite requirement



CERTIFICATE

PC Repair

		17 hours	Done	Curr	To do				Done	Curr	To do
Orientation		2 hours									
	COLL	105 Technical Career Dev I (1)									
	COLL	106 Technical Career Dev II (1)									
Major Courses		15 hours									
		Required Course (12 hours)									
	CNS	101 Introduction to Electronics (3)									
	CNS	111 PC Basics I (3)									
	CNS	112 PC Basics II* (3)									
	CNS	113 Introduction to Networks* (3)									
		Approved Electives (3 hours)									
	CNS	149 Cybersecurity* (3)									
		Other CNS courses as approved by division chair									



CERTIFICATE

Information Technology


		23 hours	Done	Curr	To do						
Orientation		2 hours									
	COLL	105 Technical Career Development I (1)									
	COLL	106 Technical Career Development II (1)									
Major Courses		21 hours									
		Required (15 hours)									
	CNS	111 PC Basics (3)									
	CNS	112 PC Basics II* (3)									
	CNS	113 Introduction to Networks* (3)									
	CNS	122 VMware: Install, Config, Manage (3)									
	CNS	275 Advanced MS Server* (3)									
		Approved Electives (6 hours)									
	CNS	149 Cybersecurity I* (3)									
	CNS	222 VMware: Optimize & Scale (3)									
	CNS	259 Intro to PowerShell* (3)									




CERTIFICATE

Cisco Networking

		17 hours	Done	Curr	To do				Done	Curr	To do
Orientation		2 hours									
	COLL	105 Technical Career Dev. I (1)									
	COLL	106 Technical Career Dev. II (1)									
Major Courses		15 hours									
	CNS	101 Intro to Electronics (3)									
	CNS	111 PC Basics* (3)									
	CNS	113 Intro to Networks* (3)									
	CNS	114 CCNA Net Switc, Route Ess* (3)									
	CNS	251 CCNA Ent Net, Sec, Auto* (3)									

		CERTIFICATE									
		Coding									
		23 hours				Done	Curr	To do			
Orientation		2 hours									
	COLL	105 Technical Career Development I (1)									
	COLL	106 Technical Career Development II (1)									
Major Courses		15 hours									
		Required (15 hours)									
	CNS	111 PC Basics (3)									
	CNS	112 PC Basics II* (3)									
	CNS	126 Game Development Through Python (3)									
	CNS	131* Intro to Gaming Programming (3)									
	CNS	141* Programming for Gaming (3)									
		Approved Electives (6 hours)									
	CNS	221* Desktop Game Development (3)									
	CNS	231* Android Mobile Game Development (3)									
	CNS	241* IOS Development for Gaming (3)									

		ASSOCIATE OF APPLIED SCIENCE DEGREE														
		Computer & Network Support Technology														
		Done				Curr	To do					Done	Curr	To do		
Orientation		2 hours							60 hours							
	COLL	105 Technical Career Dev I (1)														
	COLL	106 Technical Career Dev II (1)														
Communication		9 hours														
Written Communications (6 hours)									Oral Communications (3 hours)							
	ENGL	101*							COMM	104*						
	ENGL	102*, 104*														
	ENGL	203*														
Mathematics		3 hours														
	MATH	104*							MATH	135*						
Civics		3 hours														
	HIST	106*							PLSC	103*						
	HIST	107*														
Required Technical Courses		22 hours							Approved Electives				18 hours			
	CNS	101 Intro to Electronics (3)							CNS	122 VmWare: Install (3)						
	CNS	111 PC Basics I* (3)							CNS	149 Cybersecurity I (3)						
	CNS	112 PC Basics II* (3)							CNS	222 VmWare: Optimize (3)						
	CNS	113 Introduction to Networks (3)							CNS	249 Cybersecurity II (3)						
	CNS	114 Network Switch/Routing Ess* (3)							CNS	250 Linux Network Admin* (3)						
	CNS	251 CCNA Ent Net., Sec. & Auto.* (3)							CNS	259 Intro to PowerShell* (3)						
	CNS	285 CNS Internship* (4)							CNS	275 Advanced MS Server* (3)						
Required Support Course		3 hours														
	BSAD	125 Computer Applications (3)														
(*) - These courses have pre-requisite requirements. See catalog description for details.																
Required Online Course		0 hour														
	CVCS	101 Missouri Higher Ed Civics Exam														

Communication AA

Career fields include mass media (newspapers, radio, TV, magazines), internet publications, and public relations, advertising, marketing, and human resources. In all fields, key job skills focus on effective communication by writing, speaking, or visually communicating. Crowder offers basic course work and experience through publications and hands-on activities. Transfer to a four-year college is recommended. For best transfer, students should contact the college of choice. For those seeking a job directly after graduating, the internship in the selected career field is recommended.

Program of Study

Orientation		1 hour	
COLL	101		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		3 hours	
MATH	125*#, 130*, 135*		
Science		7 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
Lab		Non-Lab	
BIOL	101, 110, 120	BIOL	102
BIOL	152*	PHYS	102
CHEM	101, 104, 111*	PHYS	105
GEOL	115, 210*		
PHYS	101, 190*		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Civics (3 hours)			
HIST	106*, 107*	ECON	201*, 202*
PLSC	103*	GEOG	111
		PSYC	101, 211*
		SOC	101
GE CORE Electives		5 hours	
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study			
Major Courses		15 hours	
COMM	102	COMM	150*
COMM	105	COMM	151*
COMM	111*		
Approved Electives		3 hours	
COMM	220	COMM	250*
COMM	225*	COMM	251*
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

Suggested Plan of Study

FIRST YEAR

Fall Semester	Hours
COLL 101 College Orientation	1
COMM 102 Intro to Public Relations	3
COMM 104 Fundamentals of Speech	3
COMM 150 Intro to Journalism	3
ENGL 101 English Composition	3
MATH 125 Quantitative Reasoning	3
TOTAL	16

Spring Semester	Hours
COMM 105 Intro to Human Communication	3
COMM 111 Magazine Production	3
COMM 151 News/Feature Writing	3
ENGL 102 Advanced English Comp	3
Approved Soc & Behavioral Science Elective	3
TOTAL	15

SECOND YEAR

Fall Semester	Hours
Approved Civics Course	3
Approved GE Core Elective	2-3
Approved Humanities Course	3
Approved Humanities Course	3
Approved Science Course	3-5
TOTAL	14-17

Spring Semester	Hours
Approved GE Core Elective	2-3
Approved Humanities Course	3
Approved Journalism Elective	3
Approved Science Course	3-5
Approved Soc & Behavioral Science Course	3
TOTAL	14-17

TOTAL HOURS REQUIRED 61-63

*Prerequisite required

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

- Preferred class for this degree option

Construction Technology Certificate

Advanced Construction Technology Certificate

Construction Management AAS

The Construction Management program prepares students for employment in the construction industry or in related occupations. The program is built around National Center for Construction Education and Research (NCCER) standards and is comprised of a core component covering basic employability skills, introductory carpentry, and construction management.

The Construction Technology and Advanced Construction Technology certificates prepare students for entry-level employment in the construction industry with a skill set that includes construction safety, common hand/power tools, basic carpentry fundamentals, framing and finishing, masonry, plumbing, and residential wiring. In the Advanced certificate, students will be introduced to site layout and project management and supervision. All courses are based on the NCCER (National Council for Construction Education and Research) curriculum.

Program of Study

Construction Technology Certificate Courses			9 hours
CONS	105	Introduction to Construction Technology (3)	
CONS	112	Carpentry Fundamentals (3)	
CONS	116*	Framing & Finishing (3)	
Electives (All Required for Adv Cert & AAS)			9 hours
CONS	121	Masonry (3)	
CONS	131	Plumbing (3)	
CONS	141*	Electrical (3)	
Orientation			2 hours
COLL	105	Technical Career Dev I (1)	
COLL	106	Technical Career Dev II (1)	
Advanced Certificate Courses			9 hours
CONS	174*	Carpentry Forms (3)	
CONS	232	Site Layout (3)	
CONS	245*	Project Management (3)	
Approved Advanced Certificate Electives			3 hours
AMT	112	Occupational Safety (3)	
BSAD	150	Introduction to Business (3)	
CONS	Any course (3)		
DRFT	153	Construction Graphics (3)	
ENER	105	Introduction to Energy (3)	
Communications			9 hours
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
ENGL	203*		
Oral Communications (3 hours)			
COMM	104*		
Mathematics			3 hours
MATH	104*		
MATH	135*		
Civics			3 hours
HIST	106*, 107*		
PLSC	103*		
Common Support Courses			6 hours
BSAD	115 (3)		
DRFT	153 (3)	– OR – BSAD 125 (3)	
Common Construction Courses			9 hours
CONS	108	Energy Conservation Techniques (3)	
CONS	155*	Basic HVAC (3)	
CONS	290*	Construction Internship (3)	
Required Online Course			0 hour
CVCS	101	Missouri Higher Ed Civics Examination	

Suggested Plan of Study FIRST YEAR

Fall Semester		Hours
COLL	105 Technical Career Dev I	1
COLL	106 Technical Career Dev II	1
CONS	105 Intro to Construction Technology	3
CONS	108 Energy Conservation Techniques	3
CONS	131 Plumbing (Elective for Cert)	3
CONS	141 Electrical (Elective for Cert)	3
CONS	232 Site Layout	3
TOTAL		17

Spring Semester		Hours
CONS	112 Carpentry Fundamentals	3
CONS	116 Framing and Finishing	3
CONS	121 Masonry (Elective for Cert)	3
CONS	174 Carpentry Forms	3
CONS	245 Project Management	3
TOTAL		15

Graduate with Construction Technology Certificate
Graduate with Advanced Construction Tech Certificate

SECOND YEAR

Fall Semester		Hours
COMM	104 Fundamentals of Speech	3
DRFT	153 Construction Graphics	3
Approved Elective		3
Approved Mathematics Course		3
Approved Written Communications Course		3
TOTAL		15

Spring Semester		Hours
BSAD	115 Computer Concepts – OR – BSAD 125	3
CONS	155 Basic HVAC	3
CONS	290 Construction Internship	3
Approved Civics Course		3
Approved Written Communication		3
TOTAL		15

Graduate with Construction Management AAS

Total Basic CERTIFICATE Hours Required	17
Additional Hours for Advanced Certificate	15
Additional Hours Needed for AAS	30
Total AAS Hours Required	62

* Prerequisite requirement

Courses for Certificate	
Additional Courses for AAS Degree	



CERTIFICATE Construction Technology

Students must earn 17 hours for this certificate.

			Done	Curr	To do						
Orientation			2 hours								
	COLL	105 Technical Career Development I (1)									
	COLL	106 Technical Career Development (1)									
Construction Courses			9 hours								
	CONS	105 Intro to Construction Technology (3)									
	CONS	112 Carpentry Fundamentals (3)									
	CONS	116 Framing and Finishing* (3)									
Approved Electives			6 hours								
	CONS	121 Masonry (3)									
	CONS	131 Plumbing (3)									
	CONS	141 Electrical* (3)									



CERTIFICATE Advanced Construction Technology

			Done	Curr	To do				Done	Curr	To do
Orientation			2 hours						32 hours		
	COLL	105 Technical Career Development I (1)									
	COLL	106 Technical Career Development II (1)									
Construction Courses			27 hours								
	CONS	105 Intro to Construction Technology (3)									
	CONS	112 Carpentry Fundamentals (3)									
	CONS	116 Framing and Finishing* (3)									
	CONS	121 Masonry (3)									
	CONS	131 Plumbing (3)									
						CONS	141 Electrical* (3)				
						CONS	174 Carpentry Forms* (3)				
						CONS	232 Site Layout (3)				
						CONS	245 Project Management (3)				
Approved Advanced Certificate Electives			3 hours								
	AMT	112 Occupational Safety (3)									
	BSAD	150 Introduction to Business (3)				DRFT	153 Con Graphics (3)				
	CONS	Any course (3)				ENER	105 Introduction to Energy (3)				



ASSOCIATE OF APPLIED SCIENCE DEGREE Construction Management

			Done	Curr	To do				Done	Curr	To do
Orientation			2 hours						62 hours		
	COLL	105 Technical Career Dev. I									
	COLL	106 Technical Career Dev. II									
Communications			9 hours								
	Written Communications (6 hours)						Oral Communications (3 hours)				
	ENGL	101*					COMM	104*			
	ENGL	102*									
	ENGL	203*									
Mathematics			3 hours								
	MATH	104									
	MATH	135*									
Civics			3 hours								
	HIST	106*					PLSC	103*			
	HIST	107*									
Common Support Courses			6 hours								
	BSAD	115 Computer Concepts (3)					OR	BSAD 125			
	DRFT	153 Construction Graphics (3)									
Common Construction Courses			15 hours								
	CONS	105 Intro to Const Tech (3)				CONS	116 Framing and Finishing* (3)				
	CONS	108 Energy Con Techniques (3)				CONS	290 Construction Intern* (3)				
	CONS	112 Carpentry Fundamentals* (3)									
Major Courses			21 hours								
	CONS	121 Masonry (3)				CONS	174 Carpentry Forms* (3)				
	CONS	131 Plumbing (3)				CONS	232 Site Layout (3)				
	CONS	141 Electrical* (3)				CONS	245 Project Management* (3)				
	CONS	155 Basic HVAC* (3)									
Approved Adv Certificate Electives			3 hours								
	AMT	112 Occupational Safety (3)				DRFT	153 Construction Graphics (3)				
	BSAD	150 Intro to Business (3)				ENER	105 Intro to Energy (3)				
	CONS	Any Course (3)									
Required Online Courses			0 hour								
	CVCS	101 Missouri Higher Ed Civics Exam									

Construction: Electrical Certificate

This certificate prepares students to enter a career in construction or industrial with a skill set that will provide entry level knowledge of basic Electricity including industrial and residential electrical wiring. This program will cover an introduction to the National Electrical Code (NEC), fundamental electrical theory, and on-hands skills. Students will gain knowledge that can provide a platform into the world of employment opportunities in Electricity.

Program of Study

Suggested Plan of Study

Certificate Courses	16 hours
CNS 101 Introduction to Electronics (3)	
AMT 111 Introduction to Ind Safety (1)	
AMT 102 Introduction to Ind Electricity (3)	
CONS 141 Electrical (3)	
CONS 151 Introduction to NEC (3)	
CONS 251 NEC Wiring Methods (3)	

FIRST YEAR		
Fall Semester		Hours
AMT 102	Introduction to Industrial Electricity	3
AMT 111	Introduction to Industrial Safety	1
CNS 101	Introduction to Electronics	3
CONS 141	Electrical	3
CONS 151	Introduction to NEC	3
CONS 251	NEC Wiring Methods	3
TOTAL		16
Total Hours Required		16



CERTIFICATE

Construction: Electrical

General Education Core			Done	Curr	To do		Done	Curr	To do
Required Courses		16 hours							
	CNS	101 Introduction to Electronics (3)							
	ATM	111 Introduction to Ind Safety (1)							
	AMT	102 Introduction to Ind Electricity (3)							
	CONS	141 Electrical (3)							
	CONS	151 Introduction to NEC (3)							
	CONS	251 NEC Wiring Methods (3)							

Criminal Justice AA

The Criminal Justice Associate Degree Program is designed to provide the student with the legal, technical, and practical aspects of justice system. This degree will provide the student with opportunities for careers or continued education in criminal justice, corrections, juvenile justice, and government or private security operations.

Program of Study

Orientation		1 hour	
COLL	101		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		3 hours	
MATH	125*, 130*, 135*#		
Science		7 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
	Lab		Non-Lab
BIOL	101, 110, 120	PHYS	105
BIOL	152*		
CHEM	101, 104, 111*		
GEOL	115, 210*		
PHYS	101, 190*		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Civics (3 hours)			
HIST	106*, 107*	ECON	201*, 202*
PLSC	103*	GEOG	111
		PSYC	101, 211*
		SOC	101
GE CORE Electives		5 hours	
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study			
Major Courses		18 hours	
Required Courses (15 hours)		Electives (3 hours)	
CJ	101	CJ	102**#
CJ	210	CJ	190
CJ	250	CJ	270**, 285**#, 290
CJ	265	PSYC	101
CJ	280	SOC	101
		SWK	200*, 230
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

Suggested Plan of Study**FIRST YEAR**

Fall Semester		Hours
CJ	101 Intro to Criminal Justice Sys	3
COLL	101 College Orientation	1
ENGL	101 English Composition I	3
MATH	135 Algebra for Calculus	3
	Approved GE Core Elective	2
	Approved Humanities Course	3
TOTAL		15

Spring Semester		Hours
CJ	280 Report Writing	3
ENGL	102 – OR – ENGL 104	3
	Approved Civics Course	3
	Approved Science Course	3-5
TOTAL		12-14

SECOND YEAR

Fall Semester		Hours
CJ	210 Criminal Procedures	3
CJ	250 Criminal Law	3
COMM	104 Fundamentals of Speech	3
	Approved Science Course	3-5
	Approved Soc & Behavioral Science Course	3
TOTAL		15-17

Spring Semester		Hours
CJ	265 Ethics in Criminal Justice	3
	Approved Criminal Justice Course	3
	Approved GE Core Elective	3
	Approved Humanities Course	3
	Approved Humanities Course	3
	Approved Soc & Behavioral Science Course	3
TOTAL		18

TOTAL HOURS REQUIRED 60-64

**Highly recommended for Police Academy at MSSU

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

*Prerequisite required

- Preferred class for this degree option



ASSOCIATE OF ARTS DEGREE

Criminal Justice

General Education Core			Done	Curr	To do		Done	Curr	To do
Orientation			1 hour				64 hours		
	COLL	101							
Communications			9 hours						
	Written Communications (6 hours)						Oral Communications (3 hours)		
	ENGL	101*					COMM	104*	
	ENGL	102*, 104*							
Humanities			9 hours						
	ART	101, 106					HIST	101*, 102*	
	ASL	101, 102*					MUSC	101	
	ENGL	109*, 222*, 225*					PHIL	101*, 121, 201*, 202*	
	ENGL	230*, 235*, 240*, 245*					SPAN	101, 102*	
	FREN	101					TA	205	
Mathematics			3 hours						
	MATH	125*							
	MATH	130*							
	MATH	135* (Recommended)							
Science			7 hours						
	Lab						Non-Lab		
	BIOL	101, 110, 120					PHYS	105	
	BIOL	152*							
	CHEM	101, 104, 111*							
	GEOL	115, 210*							
	PHYS	101, 190*							
Social and Behavioral Science			9 hours						
	Civics (3 hours)								
	HIST	106*					ECON	201*, 202*	
	HIST	107*					GEOG	111	
	PLSC	103*, 104*					PSYC	101, 211*	
							SOC	101	
GE Core Electives			5 hours						
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study.									
Criminal Justice Courses			18 hours						
	Required Courses (15 hours)						Electives (3 hours)		
	CJ	101 Intro to the Criminal Justice Sys (3)					CJ	102 Crime Scene Processing (3)	
	CJ	210 Criminal Procedures (3)					CJ	190 Patrol Operations (3)	
	CJ	250 Criminal Law (3)					CJ	270 Drug Investigation** (3)	
	CJ	265 Ethics in Criminal Justice (3)					CJ	285 Family Violence** (3)	
	CJ	280 Report Writing (3)					CJ	290 Police Super & Mgmt** (3)	
							PSYC	101 General Psychology (3)	
							SOC	101 General Sociology (3)	
							SWK	200* Intro to Social Work (3)	
							SWK	230 Substance Abuse Inter (3)	
Required Online Course			0 hour						
	CVCS	101 MO Higher Ed Civics Exam							

Criminal Justice Certificate

Criminal Justice AAS

The Criminal Justice Associate Degree Program is designed to provide the student with the legal, technical, and practical aspects of justice system. This degree will provide the student with opportunities for careers or continued education in criminal justice, corrections, juvenile justice, and government or private security operations.

Criminal Justice is increasingly becoming a multi-disciplinary vocation involving law enforcement, the courts, corrections, security professionals, victim advocates and juvenile services. The certificate is designed for professionals who want to increase their knowledge to meet their career objectives in these growing fields.

Program of Study

Suggested Plan of Study

Certificate Courses		17 hours
CJ	101 Introduction to Criminal Justice (3)	
CJ	210 Criminal Procedures (3)	
CJ	250 Criminal Law (3)	
CJ	265 Ethics in Criminal Justice (3)	
CJ	280 Report Writing (3)	
COLL	105 Technical Career Development I (1)	
COLL	106 Technical Career Development II (1)	
Certificate Electives		9 hours
All required for AAS unless otherwise noted		
CJ	102 Crime Scene Processing (3)	
CJ	103 Telecommunications (3)	
CJ	190 Patrol Operations (3)	
CJ	200 Criminal Investigations± (3)	
CJ	230 Criminal Justice Internship* (3)	
CJ	270 Drug Investigation (3)	
CJ	285 Family Violence# (3)	
CJ	290 Police Supervision and Management (3)	
EMT	101 Emergency Medical Technician (9)	
FSCI	111 Firefighter I and II (6)	
PSYC	101 General Psychology (3)	
SOC	101 General Sociology (3)	
SWK	200 Introduction to Social Work* (3)	
SWK	230 Substance Abuse Interventions (3)	
Communications		9 hours
Written Communications (6 hours)		
ENGL	101*	
ENGL	102*	
Oral Communications (3 hours)		
COMM	104*	
Mathematics		3 hours
MATH	104*, 125*	
MATH	135*	
Civics		3 hours
HIST	106*, 107*	
PLSC	103*	
Required Support Courses		3 hours
BSAD	115 – OR – BSAD 125	
Required CJ Courses		18 hours
CJ	285 Family Violence (3)	
Plus 12 hours of required courses from Certificate Electives section		
Required Online Course		0 hour
CVCS	101 Missouri Higher Ed Civics Examination	

FIRST YEAR		
Fall Semester		Hours
CJ	101 Introduction to Criminal Justice	3
CJ	210 Criminal Procedures	3
CJ	250 Criminal Law	3
CJ	280 Report Writing	3
Approved Certificate Elective		3
TOTAL		15
Spring Semester		Hours
CJ	265 Ethics in Criminal Justice	3
COLL	105 Technical Career Development I	1
COLL	106 Technical Career Development II	1
Approved Certificate Elective		3
Approved Certificate Elective		3
Approved Criminal Justice elective		3
Approved Criminal Justice elective		3
TOTAL		17
Graduate with Criminal Justice Certificate		
SECOND YEAR		
Fall Semester		Hours
CJ	285 Family Violence	3
COMM	104 Fundamentals of Speech	3
Approved Criminal Justice elective		3
Approved Mathematics Course		3
Approved Written Communications Course		3
TOTAL		15
Spring Semester		Hours
BSAD	115 – OR – BSAD 125	3
CJ	103 Telecommunications	3
CJ	230 Internship	3
Approved Civics Course		3
Approved Written Communication		3
TOTAL		15
Graduate with Criminal Justice AAS		
Total CERTIFICATE Hours Required		26
Additional Hours Needed for AAS		36
Total AAS Hours Required		62

*Prerequisite requirement
#Preferred class
±NOT required for AAS

Courses for Certificate	
Additional Courses for AAS Degree	



CERTIFICATE Criminal Justice

			Done	Curr	To do			
Orientation		2 hours				26 hours		
	COLL	105 Technical Career Development (1)						
	COLL	106 Technical Career Development (1)						
Major Courses		15 hours						
	CJ	101 Intro to Criminal Justice (3)						
	CJ	210 Criminal Procedures (3)						
	CJ	250 Criminal Law (3)						
	CJ	265 Ethics in Criminal Justice (3)						
	CJ	280 Report Writing (3)						
Specialty Electives		9 hours						
						CJ	290 Police Super & Mgmt (3)	
	CJ	102 Crime Scene Processing (3)				EMT	101 Emergency Med Tech (9)	
	CJ	103 Telecommunications (3)				FSCI	111 Firefighter I and II (6)	
	CJ	190 Patrol Operations (3)				PSYC	101 General Psychology (3)	
	CJ	200 Criminal Investigations (3)				SOC	101 General Sociology (3)	
	CJ	230 Criminal Justice Internship* (3)				SWK	200 Intro to Social Work* (3)	
	CJ	270 Drug Investigation (3)				SWK	230 Substance Abuse Inter (3)	
	CJ	285 Family Violence (3)						



ASSOCIATE OF APPLIED SCIENCE DEGREE Criminal Justice

			Done	Curr	To do				Done	Curr	To do
Orientation			2 hours			62 hours					
	COLL	105 Technical Career Dev I (1)									
	COLL	106 Technical Career Dev II (1)									
Communications			9 hours								
	Written Communications (6 hours)					Oral Communications (3 hours)					
	ENGL	101*				COMM	104*				
	ENGL	102*, 104*									
Mathematics			3 hours								
	MATH	125*, 135*				MATH	104*				
Civics			3 hours								
	HIST	106*				PLSC	103*, 104*				
	HIST	107*									
Required Support Courses			3 hours								
	BSAD	115				OR	BSAD 125				
Required CJ Courses			36 hours								
	CJ	101 Intro to Criminal Justice (3)				CJ	265 Ethics in Criminal Justice (3)				
	CJ	102 Crime Scene Processing (3)				CJ	270 Drug Investigation (3)				
	CJ	103 Telecommunications (3)				CJ	280 Report Writing (3)				
	CJ	190 Patrol Operations (3)				CJ	285 Family Violence (3)				
	CJ	210 Criminal Procedures (3)				CJ	290 Police Supervision/Mgmt (3)				
	CJ	230 Criminal Justice Intern (3)				EMT	101 Emergency Medical Tech (9)				
	CJ	250 Criminal Law (3)				FSCI	111 Firefighter I and II (6)				
						PSYC	101 General Psychology (3)				
						SOC	101 General Sociology (3)				
						SWK	200 Intro to Social Work* (3)				
						SWK	230 Substance Abuse Inter (3)				
Required Online Course			0 hour								
	CVCS	Missouri Higher Ed Civics Examination									

Diesel Technology Electrical/Electronic I & II Certificates

Diesel Technology Engines I & II Certificates

Diesel Technology AAS

Interesting and challenging career opportunities are offered by the transportation and agricultural industries in the area of diesel technology. Jobs available to graduates include technicians, equipment managers, mechanics, service center supervisors, parts personnel, and salesmen. This program prepares students for ASE certification testing.

The Diesel Technology Electrical/Electronic I & II certificates prepare students to enter careers in Diesel Technology with a basic skill set that will provide entry level knowledge of diesel electrical systems. The students will be introduced to basic theory, operation and testing of various electrical systems found on industrial and trucking equipment. The Electrical/Electronic I certificate will introduce the students to basic diesel powertrains, and air conditioning. The students will be instructed on advanced electronics including lighting systems, instrumentation, warning systems, ignition systems, computer controlled systems, and brake systems for the Electrical/Electronic II certificate.

The Diesel Engines I & II certificates prepare students to enter careers in Diesel Engine Technology with a basic skill set that will provide entry level knowledge of diesel engines including parts identification, measurements of parts, parts reusability, and preventive maintenance. This course will take the student into the operation and diagnostics on the Diesel Engine, including disassembling, repairs and reassemble. Students will have an introduction to Hydraulics, and Steering & Suspension.

Students will be required to complete an internship with this program.

Program of Study

Electrical/Electronic I Certificate Courses			16 hours
DIES	184	Electricity/Electronics (4)	
DIES	204	Diesel Powertrains (4)	
DIES	234	Air Conditioning (4)	
DIES	244*	Internship (4)	
Electrical/Electronic II Certificate Courses			12 hours
All courses in Electrical/Electronic I plus:			
DIES	134	Diesel Hydraulics (4)	
DIES	164	Diesel Brake Systems (4)	
DIES	284	Diesel Electrical/Electronics (4)	
Diesel Engines I Certificate Courses			8 hours
DIES	124	Prevent Maintenance (4)	
DIES	144	Diesel Engines I (4)	
Also requires DIES 234 & 244			
Diesel Engines II Certificate Courses			8 hours
DIES	224	Diesel Steering & Suspension (4)	
DIES	294*	Diesel Engines II (4)	
Also requires DIES 124, 134, 144, 234, & 244			
Orientation			2 hours
COLL	105	Technical Career Development I (1)	
COLL	106	Technical Career Development II (1)	
Communications			9 hours
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
ENGL	203*		
Oral Communications (3 hours)			
COMM	104*		
Mathematics			3 hours
MATH	104*		
Civics			3 hours
HIST	106* 107*		
PLSC	103*		
Required Support Courses			3 hours
BSAD	115 (3)		
BSAD	125 (3)		
Required Online Course			0 hour
CVCS	101	Missouri Higher Ed Civics Examination	

Suggested Plan of Study

FIRST YEAR

Fall Semester		Hours
DIES	124 Preventive Maintenance (1st 8 weeks)	4
DIES	144 Diesel Engines I (2nd 8 weeks)	4
DIES	234 Air Conditioning	4
DIES	244 Internship	4
TOTAL		16

Graduate with Engines I Certificate

Spring Semester (odd year)		Hours
COLL	105 Technical Career Dev I	1
COLL	106 Technical Career Dev II	1
DIES	134 Diesel Hydraulics	4
DIES	224 Steering and Suspension	4
DIES	294 Diesel Engines II (1st 8 weeks)	4
MATH	104 Technical Mathematics	3
TOTAL		17

Graduate with Engines II Certificate

SECOND YEAR

Fall Semester		Hours
BSAD	115 - OR- BSAD 125	3
COMM	104 Fundamentals of Speech	3
DIES	204 Diesel Powertrains (1st 8 weeks)	4
DIES	184 Electrical/Electronics (2nd 8 weeks)	4
ENGL	101 English Composition	3
TOTAL		17

Graduate with Electrical/Electronic I Certificate

Spring Semester (even year)		Hours
DIES	164 Diesel Brake Systems (2nd 8 weeks)	4
DIES	284 Electrical/Electronics II (1st 8 weeks)	4
ENGL	102 Advanced English Composition	3
HIST	106 U.S. History I	3
TOTAL		14

Graduate with Electrical/Electronic II Certificate Graduate with Diesel Technology AAS

Total Engines I Certificate Hours Required	16
Additional Hours for Engines II Certificate	14
Additional Hours for Electrical I Certificate	8
Additional Hours for Electrical II Certificate	8

Additional Hours Needed for AAS	18
Total AAS Hours Required	64

*Prerequisite requirement

Courses for Certificate	
Additional Courses for AAS Degree	



CERTIFICATE

Diesel Technology: Electrical/Electronic I

Students must complete 16 hours for the Electrical/Electronic I certificate.

Done Curr To do

Major Courses		16 hours			
DIES	184 Electricity/Electronics (4)				
DIES	204 Diesel Powertrains (4)				
DIES	234 Air Conditioning (4)				
DIES	244 Internship* (4)				



CERTIFICATE

Diesel Technology: Electrical/Electronic II

Students must complete 30 hours for the Diesel Technology certificate.

Done Curr To do

Orientation		2 hours							
COLL	105 Carer Technical Development I (1)								
COLL	106 Career Technical Development II (1)								
Major Courses		28 hours							
DIES	134 Diesel Hydraulics (4)								
DIES	164 Diesel Brake Systems (4)								
DIES	184 Electricity/Electronics (4)								
DIES	204 Diesel Powertrains (4)								
DIES	234 Air Conditioning (4)								
DIES	244 Internship* (4)								
DIES	284 Diesel Electrical/Electronics (4)								



CERTIFICATE

Diesel Technology: Engines I

Students must complete 16 hours for the Engines I certificate.

Done Curr To do

Major Courses		16 hours			
DIES	124 Prevent Maintenance (4)				
DIES	144 Diesel Engines I (4)				
DIES	234 Air Conditioning (4)				
DIES	244 Internship* (4)				

Drafting: Computer Aided Drafting (CAD) Technician Certificate

The certificate prepares students to enter a career in drafting technology with a basic skill set that will provide entry level knowledge of basic Engineering, Assembly and Technical drawings, and Print Reading. The drafting classes will provide training in computer aided drafting and design as they are used in industry. Students will utilize a variety of CAD software including Inventor, Revit, and AutoCAD.

Program of Study

Certificate Courses		17 hours
COLL	105 Technical Career Development I (1)	
COLL	106 Technical Career Development II (1)	
DRFT	101 Intro to Engineering Drawing & Print Reading (3)	
DRFT	115 Basic Computer Aided Drafting (3)	
DRFT	141 Assembly Drawings* (3)	
DRFT	153 Construction Graphics (3)	
DRFT	215 Adv Computer Aided Drafting* (3)	

Suggested Plan of Study

FIRST YEAR

Fall Semester		Hours
COLL	105 Technical Career Development I	1
COLL	106 Technical Career Development II	1
DRFT	101 Intro to Eng Drawing & Print Reading	3
DRFT	115 Basic Computer Aided Drafting	3
TOTAL		8
Spring Semester		Hours
DRFT	141 Assembly Drawings	3
DRFT	153 Construction Graphics	3
DRFT	215 Advanced CAD (Inventor)	3
TOTAL		9
Total Hours Required		17

*Prerequisite requirement

Courses for Certificate	
Additional Courses for AAS Degree	



CERTIFICATE

Computer Aided Drafting (CAD) Technician

			Done	Curr	To do			Done	Curr	To do
Required Courses		17 hours								
	COLL	105 Technical Career Development I (1)								
	COLL	106 Technical Career Development II (1)								
	DRFT	101 Intro to Eng Drwg & Print Reading (3)								
	DRFT	115 Basic Computer Aided Drafting (3)								
	DRFT	141 Assembly Drawings* (3)								
	DRFT	153 Construction Graphics (3)								
	DRFT	215 Advanced Computer Aided Drafting* (3)								

Fire Science Certificate

The Fire Science program at Crowder College Cassville prepares the student to enter an exciting career as a fire fighter. Courses will prepare students to complete State of Missouri Certification examinations. Upon successful passing of those examinations, students can be hired as an entry-level fire fighter at a Fire Department that recognizes State of Missouri qualifications.

Program of Study

<i>Fire Science Major Courses</i>			<i>16 hours</i>
COLL	101	College Orientation (1)	
FSCI	111	Firefighter I & II (6)	
EMT	101*	Emergency Med Tech (9)	

*Prerequisite requirement

Suggested Plan of Study**FIRST YEAR****FIRST YEAR**

<i>Fall Semester</i>			<i>Hours</i>
COLL	101	College Orientation	1
FSCI	111	Firefighter I & II	6
EMT	101	Emergency Med Tech	9
TOTAL			16
Total Hours Required			16



CERTIFICATE

Fire Science

Students must earn 16 hours for this certificate.			Done	Curr	To do			Done	Curr	To do
Orientation			1 hour							
	COLL	101 College Orientation (1)								
Major Courses			15 hours							
	FSCI	111 Firefighter I & II (6)								
	EMT	101 Emergency Med Tech* (9)								

General Studies AA

Students undecided about their major area of emphasis or career goals are urged to follow the General Studies curriculum. With the help of counseling from Student Services and consultation with an assigned faculty advisor, students should be able to transfer or graduate with a better idea of individual career strengths. For best results, general studies students should contact the four-year institution to which they plan to transfer while a sophomore.

Program of Study

Orientation		1 hour	
COLL	101		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101, 106, 107, 110, 111	HIST	101*, 102*
ASL	101, 102*	MUSC	101, 195, 196, 295, 296
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102
FREN	101	TA	105, 108, 112, 115, 180
		TA	205
Mathematics		3 hours	
MATH	125*, 130*, 135*		
Science		7 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
Lab		Non -Lab	
BIOL	101, 110, 120	BIOL	102
BIOL	152*	PHYS	102
CHEM	101, 104, 111*	PHYS	105
GEOL	115, 210*		
PHYS	101, 190*		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Civics - 3 hours			
HIST	106*, 107*	CJ	101
PLSC	103*	ECON	201*, 202*
		GEOG	111
		PSYC	101, 211
		SOC	101
GE CORE Electives		5 hours	
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study.			
Approved Electives		18 hours	
Courses cannot be used as electives if counted under another section and must be numbered 100 or higher.			
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

Suggested Plan of Study

FIRST YEAR		Hours
Fall Semester		
COLL	101 College Orientation	1
COMM	104 Fundamentals of Speech	3
ENGL	101 English Composition I	3
	Approved Civics Course	3
	Approved General Studies Elective	3
	Approved Mathematics Course	3
TOTAL		15
Spring Semester		
ENGL	102 English Composition II	3
	Approved GE Core Elective	2-3
	Approved General Studies Elective	3
	Approved Humanities Course	3
	Approved Science Course	3-5
TOTAL		14-17
SECOND YEAR		Hours
Fall Semester		
	Approved GE Core Elective	2-3
	Approved General Studies Elective	3
	Approved General Studies Elective	3
	Approved Humanities Course	3
	Approved Science Course	3-5
TOTAL		14-17
Spring Semester		
	Approved General Studies Elective	3
	Approved General Studies Elective	3
	Approved Humanities Course	3
	Approved Soc & Behavioral Sci Course	3
	Approved Soc & Behavioral Sci Course	3
TOTAL		15
TOTAL HOURS REQUIRED		61

*Prerequisite required

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.



Programs of Study

History AA

History majors are directed toward teaching, social services, and law. Requirements for an Associate of Arts Degree in History include the American History and Western Civilization survey courses and the completion of the general education core.

Program of Study

Orientation		1 hour	
COLL	101		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		3 hours	
MATH	125*#, 130*, 135*		
Science		7 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
Lab		Non-Lab	
BIOL	101, 110, 120	BIOL	102
BIOL	152*	PHYS	102
CHEM	101, 104, 111*	PHYS	105
GEOL	115, 210*		
PHYS	101, 190*		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Civics - 3 hours			
PLSC	103*#	ECON	201*#
Additional 3 Hours			
ECON	202	PSYC	101#, 211*
SOC	101		
GE CORE Electives		5 hours	
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study			
Major Courses		18 hours	
Required Courses (15 hours)			
HIST	101*	HIST	107*
HIST	102*	HIST	224*
HIST	106*		
Approved Electives (3 hours)			
ECON	201*, 202*	PSYC	101
GEOG	111	SOC	101
PHIL	121		
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

Suggested Plan of Study

FIRST YEAR

Fall Semester	Hours
COLL 101 College Orientation	1
COMM 104 Fundamentals of Speech	3
ENGL 101 English Composition I	3
HIST 106 U.S. History I	3
MATH 125 Quantitative Reasoning	3
Approved Soc & Behavioral Science Course	3
TOTAL	16

Spring Semester	Hours
ENGL 102 English Composition II	3
HIST 107 OR HIST 224	3
PLSC 103 Nat, State, & Local Gov't	3
Approved Humanities Course	3
Approved Science Course	3-5
TOTAL	15-17

SECOND YEAR

Fall Semester	Hours
HIST 101 Western Civilization I	3
Approved Elective	3
Approved Humanities Course	3
Approved Science Course	3-5
TOTAL	12-14

Spring Semester	Hours
HIST 102 Western Civilization II	3
HIST 224 OR HIST 107	3
Approved Elective	3
Approved GE Core Elective	5
Approved Soc & Behavioral Science Course	3
TOTAL	17

TOTAL HOURS REQUIRED 60-64

*Prerequisite required

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

- Preferred class for this degree option



ASSOCIATE OF ARTS DEGREE

History

General Education Core				Done	Curr	To do		Done	Curr	To do
Orientation		1 hour					60 - 64 hours			
	COLL	101								
Communications		9 hours								
	Written Communications (6 hours)						Oral Communications (3 hours)			
	ENGL	101*					COMM	104*		
	ENGL	102*, 104*								
Humanities		9 hours								
	ART	101, 106					HIST	101*, 102*		
	ASL	101, 102*					MUSC	101		
	ENGL	109*, 222*, 225*					PHIL	101*, 121, 201*, 202*		
	ENGL	230*, 235*, 240*, 245*					SPAN	101, 102*		
	FREN	101					TA	205		
Mathematics		3 hours								
	MATH	125* (Recommended)					MATH	130*, 135*		
Science		7 hours								
	Lab						Non-Lab			
	BIOL	101, 110, 120					BIOL	102		
	BIOL	152*					PHYS	102		
	CHEM	101, 104, 111*					PHYS	105		
	GEOL	115, 210*								
	PHYS	101, 190*								
Social and Behavioral Science		9 hours								
	Missouri Constitution (3 hours)									
	PLSC	103*, 104*					ECON	201*		
	3 hours of the following:						GEOG	111		
	ECON	202*					PSYC	101, 211*		
	SOC	101								
GE Core Electives		5 hours								
Any additional 5 credit hours from courses listed above.										
Courses cannot be used as Core electives if counted under another section of this Program of Study.										
Major Courses		18 hours								
	Required (15 hours)						Approved Electives (3 hours)			
	HIST	101 Western Civ I* (3)					ECON	201 Prin of Econ I* (3)		
	HIST	102 Western Civ II* (3)					ECON	202 Prin of Econ II* (3)		
	HIST	106 U.S. History I* (3)					GEOG	111 World Regional Geography* (3)		
	HIST	107 U.S. History II* (3)					PHIL	121 World Religions (3)		
	HIST	224 Research & Writ in Hist* (3)					PSYC	101 Gen Psychology (3)		
							SOC	101 Gen Sociology (3)		
Required Online Course		0 hour								
	CVCS	101 MO Higher Ed Civics Exam								

HVAC Technician: HVAC Installer Certificate**HVAC Technician: HVAC Technician Certificate****HVAC Technician AAS**

The HVAC Technology program prepares students for employment as entry-level service and warranty technicians in the heating and air conditioning industry by providing a variety of hands on, real-world experiences. Student will have the opportunity to earn the EPA 608 refrigerant certification.

The HVAC Installer and HVAC Technician certificates prepare students for employment in HVAC with a skill set that includes electrical safety, fundamentals of heating and cooling, electrical and mechanical systems, ductwork, airflow, and print reading. In the HVAC Technician certificate, students will gain experience troubleshooting equipment and gain an understanding of commercial equipment.

Program of Study

HVAC Installer Certificate Courses		25 hours
AMT	111 Intro to Industrial Safety (1)	
CNS	111 Intro to Electronics (3)	
CONS	141 Electrical (3)	
DRFT	153 Construction Graphics (3)	
HVAC	115 Heating Fundamentals (3)	
HVAC	116* Heating Service (3)	
HVAC	120 Refrigeration Systems I (3)	
HVAC	121* Refrigeration Systems II (3)	
HVAC	125 Equipment Design (3)	
HVAC Technician Certificate Courses		18 hours
AMT	102 Intro to Industrial Electricity (3)	
AMT	104 Electrical Motor Controls (3)	
CONS	108 Energy Conservation Techniques (3)	
HVAC	130* HVAC Control & Troubleshooting (3)	
HVAC	135* Commercial Equipment & Applications (3)	
MATH	104* Technical Math (3)	
Certificate Electives		3 hours
BSAD	150 Intro to Business (3)	
CONS	105 Intro to Construction (3)	
DRFT	101 Intro to Engineering Drawing & Print Reading (3)	
ENER	105 Intro to Energy (3)	
ENER	265 Alternative Energy Mkt & Project Mgmt (3)	
Orientation		2 hours
COLL	105 Technical Career Development I (1)	
COLL	106 Technical Career Development II (1)	
Communications		9 hours
Written Communications (6 hours)		
ENGL	101* English Composition (3)	
ENGL	102* Advanced English Composition (3)	
ENGL	103* Honors English Composition (3)	
Oral Communications (3 hours)		
COMM	104* Fundamentals of Speech (3)	
Civics		3 hours
HIST	106*, 107*	
PLSC	103*	
AAS Technical Courses		3 hours
BSAD	115 Computer Concepts (3) - OR - BSAD 125 (3)	
Required Online Course		0 hour
CVCS	101 Missouri Higher Ed Civics Examination	

Suggested Plan of Study**FIRST YEAR**

Fall Semester		Hours
AMT	111 Intro to Industrial Safety	1
CONS	141 Electrical	3
HVAC	115 Heating Fundamentals	3
HVAC	116 Heating Service	3
HVAC	120 Refrigeration Systems I	3
HVAC	121 Refrigeration Systems II	3
HVAC	125 Equipment Design	3
TOTAL		19

Spring Semester		Hours
AMT	102 Intro to Industrial Electricity	3
CNS	111 Intro to Electronics	3
COLL	105 Technical Career Development I	1
COLL	106 Technical Career Development II	1
DRFT	153 Construction Graphics	3
HVAC	130 HBAC Control & Troubleshooting	3
HVAC	135 Commercial Equipment & Applications	3
TOTAL		17

Graduate with HVAC Installer Certificate**SECOND YEAR**

Fall Semester		Hours
AMT	104 Electrical Motor Controls	3
CONS	108 Energy Conservation Techniques	3
MATH	104 Technical Math	3
Approved Certificate Elective		3
Approved Written Communications Course		3
TOTAL		15

Graduate with HVAC Technician Certificate

Spring Semester		Hours
BSAD	115 OR BSAD 125	3
COMM	104 Fundamentals of Speech	3
Approved Civics Course		3
Approved Written Communications Course		3
TOTAL		12

Graduate with HVAC Technician AAS

Total HVAC Installer Certificate Hours Required	25
Additional Hours Needed for HVAC Tech Cert	23
Additional Hours Needed for HVAC Tech AAS	15
TOTAL HOURS REQUIRED	63

*Prerequisite requirement

Courses for Certificate	
Additional Courses for AAS Degree	



CERTIFICATE HVAC Installer Technician

Certificate Courses		25 hours							
	AMT	111 Intro to Industrial Safety (1)							
	CNS	111 Intro to Electronics (3)							
	CONS	141 Electrical (3)							
	DRFT	153 Construction Graphics (3)							
	HVAC	115 Heating Fundamentals (3)							
	HVAC	116* Heating Service (3)							
	HVAC	120 Refrigeration Systems I (3)							
	HVAC	121* Refrigeration Systems II (3)							
	HVAC	125 Equipment Design (3)							



CERTIFICATE HVAC Technician

Orientation		2 hours	Done	Curr	To do	48 hours	Done	Curr	To do
	COLL	105 Technical Career Development I (1)							
	COLL	106 Technical Career Development II (1)							
Certificate Courses		40 hours							
	AMT	102 Intro to Industrial Electricity (3)				HVAC	116* Heating Service (3)		
	AMT	104 Electrical Motor Controls (3)				HVAC	120 Refrigeration Systems I (3)		
	AMT	111 Intro to Industrial Safety (1)				HVAC	121* Refrigeration Systems II (3)		
	CNS	111 Intro to Electronics (3)				HVAC	125 Equipment Design (3)		
	CONS	108 Energy Conservation Techniques (3)				HVAC	130* HVAC Control & Trblshtng (3)		
	CONS	141 Electrical (3)				HVAC	135* Commercial Equip & App (3)		
	DRFT	153 Construction Graphics (3)							
	HVAC	115 Heating Fundamentals (3)							
Certificate Electives		3 hours							
	BSAD	150 Introduction to Business (3)				ENER	105 Intro to Energy (3)		
	CONS	105 Intro to Construction (3)				ENER	265 Alternative Energy Mkt & PM (3)		
	DRFT	101 Intro to Engineering, Draw & Print (3)							
Mathematics		3 hours							
	MATH	104* Tehnical Math (3)							



ASSOCIATE OF APPLIED SCIENCE DEGREE HVAC Technician

Orientation		2 hours	Done	Curr	To do	63 hours total	Done	Curr	To do
	COLL	105 & 106							
Communications		9 hours							
Written Communications (6 hours)						Oral Communications (3 hours)			
	ENGL	101*				COMM	104*		
	ENGL	102*							
	ENGL	103*							
Mathematics		3 hours							
	MATH	104*							
Civics		3 hours							
	HIST	106*				PLSC	103*		
	HIST	107*							
HVAC		40 hours				Approved Electives		3 hours	
Required Courses									
	AMT	102 Intro to Industrial Electricity (3)				BSAD	150 Intro to Business (3)		
	AMT	104 Electrical Motor Controls (3)				CONS	105 Intro to Construction (3)		
	AMT	111 Intro to Industrial Safety (1)				DRFT	101 Intro to Eng Drawing & PR (3)		
	CNS	111 Intro to Electronics (3)				ENER	105 Intro to Energy (3)		
	CONS	108 Energy Conservation Tech (3)				ENER	265 Alt. Energy Mkt & PM (3)		
	CONS	141 Electrical (3)							
	DRFT	153 Construction Graphics (3)							
	HVAC	115 Heating Fundamentals (3)							
	HVAC	116* Heating Service (3)							
	HVAC	120 Refrigeration Systems I (3)							
	HVAC	121* Refrigeration Systems II (3)							
	HVAC	125 Equipment Design (3)							
	HVAC	130* HVAC Control & Troubleshooting (3)							
	HVAC	135* Commercial Equipment & App (3)							
Technical Courses		3 hours							
	BSAD	115 Computer Concepts (3)				OR	BSAD 125 (3)		
Required Online Course		0 hour							
	CVCS	101 Missouri Higher Ed Civics Exam							

Information Technology AA

Information Technology at Crowder prepares the students for transfer to a four-year Information Technology or Cybersecurity program. This degree provides a core of general education courses plus specific business courses and information technology courses necessary for transfer to many four-year programs. The following program is suggested for students intending to transfer following graduation. For best transfer, contact with the senior institution should be made as early in the program as possible.

Program of Study

Orientation		1 hour	
COLL	101		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		3 hours	
MATH	135*#		
Science		7 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
Lab		Non-Lab	
BIOL	101, 110, 120	BIOL	102
BIOL	152*	PHYS	102
CHEM	101, 104, 111*	PHYS	105
GEOL	115, 210*		
PHYS	101, 190*		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Civics - 3 hours			
HIST	106*, 107*	ECON	201*(Required)
PLSC	103*	PSYC	101#
GE CORE Electives		5 hours	
ECON 202—Required			
Students should meet the five-hour requirement by selecting from ECON 202 and any other courses listed above or from GEOG 111, PSYC 211, or SOC 101; however, courses can only be counted on one category and not be counted under two categories.			
Major Courses		15 hours	
BSAD	125	ITC	295
ITC	235	ITC	299
ITC	260		
Approved Business Electives (6 hours)			
Courses must be approved from the Business Department.			
Suggested Electives:			
BSAD	130*	ACCT	201*#
BSAD	230	ACCT	202*#
BSAD	236*		
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

- Preferred class for this degree option

Suggested Plan of Study

FIRST YEAR

Fall Semester	Hours
Approved Humanities Course	3
BSAD 125 Computer Applications	3
COLL 101 College Orientation	1
COMM 104 Fundamentals of Speech	3
ENGL 101 English Composition I	3
MATH 135 Algebra for Calculus	3
TOTAL	16

Spring Semester	Hours
ENGL 102 English Composition II	3
Approved Humanities Course	3
ITC 235 Computer Hardware & Op Systems	3
PSYC 101 General Psychology	3
Approved Science Course	3-5
TOTAL	15-17

SECOND YEAR

Fall Semester	Hours
ITC 260 Introduction to Java Programming	3
Approved Business Elective	3
Approved GE Core Elective	2-3
ECON 201 Principles of Macroeconomics*	3
Approved Science Course	3-5
TOTAL	14-17

Spring Semester	Hours
Approved Business Elective	3
ECON 202 Principles of Microeconomics*	3
Approved Civics Course	3
Approved Humanities Course	3
ITC 295 Database Management Systems	3
ITC 299 Systems Analysis & Design	3
TOTAL	18

TOTAL HOURS REQUIRED 64-68

*Prerequisite required

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.



ASSOCIATE OF ARTS DEGREE

Information Technology

General Education Core				Done	Curr	To do		Done	Curr	To do
Orientation		1 hour					64 hours			
	COLL	101								
Communications		9 hours								
	Written Communications (6 hours)						Oral Communications (3 hours)			
	ENGL	101*					COMM	104*		
	ENGL	102*, 104*								
Humanities		9 hours								
	ART	101, 106					HIST	101*, 102*		
	ASL	101, 102*					MUSC	101		
	ENGL	109*, 222*, 225*					PHIL	101*, 121, 201*, 202*		
	ENGL	230*, 235*, 240*, 245*					SPAN	101, 102*		
	FREN	101					TA	205		
Mathematics		3 hours								
	MATH	135*								
Science		7 hours								
	Lab						Non-Lab			
	BIOL	101, 110, 120					BIOL	102		
	BIOL	152*					PHYS	102		
	CHEM	101, 104, 111*					PHYS	105		
	GEOL	115, 210*								
	PHYS	101, 190*								
Social and Behavioral Science		9 hours								
	Civics (3 hours)									
	HIST	106*					ECON	201* (Required)		
	HIST	107*					PSYC	101 (Recommended)		
	PLSC	103*, 104*								
GE Core Electives		5 hours								
Students should meet the 5 hour requirement by selecting from ECON 202 and any other courses listed above for from GEOG 111, PSYC 211 or SOC 101; however, courses cannot be used as co electives if counted under another section of the Program of Study.							ECON	202* (Required)		
Major Courses		15 hours								
							Approved Electives (6 hours)			
	BSAD	125 Computer Applications (3)					ACCT	201 Prin of Accounting I (3)		
	ITC	235 Computer HW & OS (3)					ACCT	202 Prin of Accounting II* (3)		
	ITC	260 Intro to Java Programming (3)					BSAD	130 Business Communications* (3)		
	ITC	295 DB Management Sys (3)					BSAD	230 Business Law (3)		
	ITC	299 System Analysis & Des (3)					BSAD	236 Business Statistics* (3)		
Required Online Course		0 hour								
	CVCS	101 MO Higher Ed Civics Exam								

Mathematics AA

A major in mathematics is designed for students planning to teach mathematics at the secondary school level as well as for those desiring to work as professional mathematicians outside of education. Students entering this program should enjoy working with logic and numbers and should enjoy the challenge of applying mathematics to the sciences and related areas. A bachelor degree is necessary as a minimum requirement for employment in these areas. Students with mathematics backgrounds which require pre-calculus courses may need to plan for more than four semesters to complete this program.

Program of Study

Orientation		1 hour	
COLL	101		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		3 hours	
MATH	150*#, 160*#		
Science		7 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
Lab		Non-Lab	
BIOL	101, 110, 120	BIOL	102
BIOL	152*	PHYS	105
CHEM	101, 104, 111*		
GEOL	115, 210*		
PHYS	101		
PHYS	190* (Required)		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Civics (3 hours)			
HIST	106*, 107*	ECON	201*, 202*
PLSC	103*	GEOG	111
		PSYC	101, 211*
		SOC	101
GE CORE Electives		5 hours	
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study			
Major Courses		17-19 hours	
Required Courses (14 hours)			
COMP	111*	MATH	202*
MATH	201*		
Approved Electives (3-5 hours)			
MATH	210*	PHYS	210*
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

- Preferred class for this degree option

Suggested Plan of Study

FIRST YEAR

Fall Semester		Hours
COLL	101 College Orientation	1
COMM	104 Fundamentals of Speech	3
COMP	111 Intro to Programming	4
ENGL	101 English Composition I	3
MATH	150 Calculus I, Part 1	2
Approved Civics Course		3
TOTAL		16

Spring Semester		Hours
ENGL	102 English Composition II	3
MATH	160 Calculus I, Part 2	3
PHYS	190 General Physics I	5
Approved GE Core Elective		3
Approved Humanities Course		3
TOTAL		17

SECOND YEAR

Fall Semester		Hours
MATH	201 Calculus II	5
Approved GE Core Elective		2
Approved Humanities Course		3
Approved Science Course		3-5
Approved Soc & Behavioral Science Course		3
TOTAL		16-18

Spring Semester		Hours
MATH	202 Calculus III	5
Approved Elective		3-5
Approved Humanities Course		3
Approved Soc & Behavioral Science Course		3
TOTAL		14-16

TOTAL HOURS REQUIRED 63-65

*Prerequisite required

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.



ASSOCIATE OF ARTS DEGREE

Mathematics

General Education Core				Done	Curr	To do		Done	Curr	To do
Orientation		1 hour						65 hours		
	COLL	101								
Communications		9 hours								
	Written Communications (6 hours)					Oral Communications (3 hours)				
	ENGL	101*				COMM	104*			
	ENGL	102*, 104*								
Humanities		9 hours								
	ART	101, 106				HIST	101*, 102*			
	ASL	101, 102*				MUSC	101			
	ENGL	109*, 222*, 225*				PHIL	101*, 121, 201*, 202*			
	ENGL	230*, 235*, 240*, 245*				SPAN	101, 102*			
	FREN	101				TA	205			
Mathematics		5 hours								
	MATH	150* & 160* (Required)								
Science		7 hours								
	Lab					Non-Lab				
	BIOL	101, 110, 120				BIOL	102			
	BIOL	152*				PHYS	105			
	CHEM	101, 104, 111*								
	GEOL	115, 210*								
	PHYS	101 (under review)								
	PHYS	190* (Required)								
Social and Behavioral Science		9 hours								
	Civics (3 hours)									
	HIST	106*				ECON	201*, 202*			
	HIST	107*				GEOG	111			
	PLSC	103*, 104*				PSYC	101, 211*			
						SOC	101			
GE Core Electives		5 hours								
Any additional 5 credit hours from courses listed above.										
Courses cannot be used as Core electives if counted under another section of this Program of Study.										
Major Courses		17-19 hours								
	Required Courses (14 hours)					Approved Electives (3-5 hours)				
	COMP	111 Intro to Computer Science* (4)				MATH	210 Diff Equations* (3)			
	MATH	201 Calculus II* (5)				PHYS	210 Gen Physics II* (5)			
	MATH	202 Calculus III* (5)								
Required Online Course		0 hour								
	CVCS	101 MO Higher Ed Civics Exam								

Nursing (Practical) Certificate

Crowder College offers a 56 credit hour (1360 clock hours) Practical Nursing (PN) program at the Nevada instructional site. The Practical Nursing program is fully approved by the Missouri State Board of Nursing (MSBN). This is a selective admission program. Candidates applying to the PN program must have a valid high school diploma or equivalent (such as GED or HiSet), complete the TEAS pre-entrance examination, have good moral character as evidenced by references, verify a criminal background check free of Class A or B felony, enroll in Family Care Safety Registry and not be on Employee Disqualification List, have adequate finances to complete the program and reliable transportation plus the ability to perform required functional abilities. Applications are open by February 15 each year and the application cycle is open until seats are filled. First cut-off for selection of students is April 15 with additional applications accepted on a space available basis. This two-semester program follows the Fall/Spring schedule of the college. Students can obtain an application from www.crowder.edu/Nursing/PracticalNursing or by contacting the Nursing Department at: NevadaNursing@crowder.edu.

Program of Study

Certificate Courses		56 hours
PN	150 Personal & Vocational Concepts I	
PN	151 Human Structure & Function	
PN	152 Fundamentals in Nursing I	
PN	153 Fundamentals in Nursing II	
PN	154 Medical Surgical Nursing I	
PN	155 Introduction to Pharmacology & Math for Meds	
PN	156 Gerontology	
PN	250 Fundamentals in Nursing III	
PN	251 Medical Surgical Nursing II	
PN	254 Personal & Vocational Concepts II	
PN	255 Mental Health	
PN	256 Maternal-Child Nursing	

Suggested Plan of Study

FIRST SEMESTER				Hours
Fall Semester				
PN	150	Personal & Voc Concepts I	(1st 8 wk)	3
PN	151	PN Anatomy & Phys	(1st 8 wk)	4
PN	152	Fundamentals in Nursing I	(1st 8 wk)	4
PN	153	Fundamentals in Nursing II	(2nd 8 wk)	5
PN	154	Med Surg Nursing I	(2nd 8 wk)	4
PN	155	Intro to Pharm & Math/Meds	(2nd 8 wk)	5
PN	156	Gerontology	(1st 8 wk)	3
TOTAL				28
SECOND SEMESTER				
Spring Semester				Hours
PN	250	Fundamentals in Nursing III	(16 wk)	8
PN	251	Med Surg Nursing II	(16 wk)	10
PN	254	Personal & Voc Conc II	(2nd 8 wk)	2
PN	255	Mental Health	(2nd 8 wk)	3
PN	256	Maternal-Child Nursing	(1st 8 wk)	5
TOTAL				28
Total Hours Required				56



CERTIFICATE Nursing (Practical)

			Done	Curr	To do				Done	Curr	To do
Major Courses			56 hours								
	PN	150 Personal & Vocational Concepts I (3)									
	PN	151 PN Anatomy & Physiology (4)									
	PN	152 Fundamentals in Nursing I (4)									
	PN	153 Fundamentals in Nursing II (5)									
	PN	154 Medical Surgical Nursing I (4)									
	PN	155 Introduction to Pharm & Math for Meds (5)									
	PN	156 Gerontology (3)									
	PN	250 Fundamentals in Nursing III (8)									
	PN	251 Medical Surgical Nursing II (10)									
	PN	254 Personal & Vocational Concepts II (2)									
	PN	255 Mental Health (3)									
	PN	256 Maternal-Child Nursing (5)									

Nursing (Registered) AS

The purpose of the Crowder College Nursing program is to prepare graduates who can demonstrate entry-level competencies as generalist professional nurses and to provide a foundation for continued learning. The format provides a multiple entry program where licensed practical nurses can enter with advanced standing or students may enter with no previous nursing education. The program is approved by the Missouri State Board of Nursing and nationally accredited by the Accreditation Commission for Education in Nursing (ACEN). Graduation from the nursing program does not guarantee eligibility to write the licensure exam. Eligibility is determined on an individual basis by Missouri State Board of Nursing based on the Missouri Nursing Practice Act section 335.066 or as recognized by the state in which the graduate desires to license.

The nursing faculty ascribe to adult learning theory in a conceptual learning environment where the adult learner must be an active participant in the educational process. Registered nurses function as an integral part of the health care team to deliver quality, safe, and patient-centered care using clinical judgment that is built on evidence-based practice. The nursing program is a multiple entry, limited admission program. All classes applied toward the Associate of Science in Nursing degree (both general education and core nursing courses) must be passed with a C or better. A grade point average of 2.75 on courses required for the degree and a minimum ACT composite score of 19 are required for both levels of students to be eligible for admission. Students without previous nursing education (those who are NOT licensed practical nurses) enter the program at Level I. These students complete Anatomy & Physiology I (BIOL 152) prior to beginning the nursing program. All accepted nursing students will be required to have an active CNA, RMA, CMA or EMT certification or Paramedic license prior to beginning the nursing courses (Missouri or equivalent). Applications for Level I are accepted from May 1 to September 1 for the Neosho and Cassville program that begins in January. Applications are accepted from October 15 to February 15 for the Nevada and McDonald County Nursing program which begins in August.

Licensed practical nurses are given credit for first year nursing classes and may enter the program at Level II. LPN's entering with advanced standing must have a valid license to practice (and be eligible for Missouri licensure), be IV certified, and must have completed at least Anatomy and Physiology I (BIOL 152) and II (BIOL 252) and Microbiology (BIOL 220) before beginning the second level nursing sequence. Applications for Level II are accepted from May 1 to September 1 for the Neosho and Cassville program and October 15 to February 15 for the Nevada and McDonald County program.

Program of Study

Orientation		1 hour
COLL 101		
Communications		6 hours
Written Communications (3 hrs)		
ENGL 101*		
Oral Communications (3 hrs)		
COMM 104*		
Mathematics		3 hours
MATH 125*, 130*, 135*		
Science		15 hours
BIOL 152*	BIOL 252*	
BIOL 220*		
Social and Behavioral Science		6 hours
Civics (3 hours)		Additional 3 hours:
HIST 106*, 107*	PSYC 101	
PLSC 103*, 104*	SOC 101	
Nursing Courses		36 hours
Level I courses (19 hours)		
NURS 111*	NURS 141*	
NURS 112*	NURS 142*	
NURS 121*	NURS 171*	
NURS 122*	NURS 172*	
-OR- NURS 201* LPNs Only		
Level II courses (17 hours)		
NURS 211*	NURS 242*	
NURS 212*	NURS 271*	
NURS 221*	NURS 290*	
NURS 241*		
Require Online Course		0 hour
CVCS 101	Missouri Higher Ed Civics Examination	

*Prerequisite requirement

Suggested Plan of Study

Based On Acceptance to the Program

Program Prerequisites: Anatomy & Physiology I (BIOL 152) – 5 credit hours
Active CNA, RMA or EMT certification or Paramedic license (Missouri or equivalent)
All general education courses must be completed by both Level I & Level II students.

Pre-Requisite Semester	Hours
BIOL 152 Human Anatomy & Physiology I	5
COLL 101 College Orientation	1
Approved Mathematics Course	3
PSYC 101—OR—SOC 101	3
TOTAL	12

First Semester	Hours
NURS 111 Health Concepts IA (1st 8 wks)	3
NURS 112 Health Concepts IB (2nd 8 wks)	3
NURS 141 Pharmacology I (2nd 8 wks)	2
NURS 171 Professional Concepts I (1st 8 wks)	1
BIOL 252 Human Anatomy & Physiology II	5
TOTAL	14

Second Semester	Hours
BIOL 220 General Microbiology	5
NURS 121 Health Concepts IIA (1st 8 wks)	4
NURS 122 Health Concepts IIB (2nd 8 wks)	4
NURS 142 Pharmacology I (1st 8 wks)	1
NURS 172 Professional Concepts II (2nd 8 wks)	1
TOTAL	15

Third Semester	Hours
COMM 104 Fundamentals of Speech	3
NURS 211 Health Concepts IIIA (1st 8 wks)	4
NURS 212 Health Concepts IIIB (2nd 8 wks)	4
NURS 241 Pharmacology III (1st 8 wks)	1
NURS 271 Professional Concepts III (2nd 8 wks)	2
TOTAL	14

Fourth Semester	Hours
ENGL 101 English Composition	3
HIST 106, 107 - OR - PLSC 103	3
NURS 221 Health Concepts IV (1st 8 wks)	3
NURS 242 Pharmacology IV (1st 8 wks)	1
NURS 290 Nursing Capstone (2nd 8 wks)	2
TOTAL	12

TOTAL HOURS REQUIRED 67



ASSOCIATE OF SCIENCE DEGREE

Nursing (Registered)

General Education Core				Done	Curr	To do		Done	Curr	To do
Orientation		1 hour						67 hours		
	COLL	101								
Communications		6 hours								
	Written Communications (3 hours)						Oral Communications (3 hours)			
	ENGL	101*					COMM 104*			
Mathematics		3 hours								
	MATH	125*, 130*, 135*								
Science		15 hours								
	BIOL	152*					BIOL 252*			
	BIOL	220*								
Social and Behavioral Science		6 hours								
	Civics (3 hours)						And 3 hours of the following:			
	HIST	106*								
	HIST	107*					PSYC 101 (Recommended)			
	PLSC	103*, 104*					SOC 101 (Recommended)			
Nursing Courses		36 hours								
	Level I courses (19 hours)						Level II courses (17 hours)			
	NURS	111 Health Concepts IA* (3)					NURS 211 Health Concepts IIIA* (4)			
	NURS	112 Health Concepts IB* (3)					NURS 212 Health Concepts IIIB* (4)			
	NURS	121 Health Concepts IIA* (4)					NURS 221 Health Concepts IV* (3)			
	NURS	122 Health Concepts IIB* (4)					NURS 241 Pharmacology III* (1)			
	NURS	141 Pharmacology I* (2)					NURS 242 Pharmacology IV* (1)			
	NURS	142 Pharmacology II* (1)					NURS 271 Professional Concepts III* (2)			
	NURS	171 Professional Concepts I* (1)					NURS 290 Nursing Capstone* (2)			
	NURS	172 Professional Concepts II* (1)								
OR	NURS	201 Transition *(2) LPNs Only								
Required Online Course		0 hour								
	CVCS	101 Missouri Higher Ed Civics Exam								

Occupational Therapy Assistant AS

The Occupational Therapy Assistant program prepares graduates to demonstrate entry level competencies as an Occupational Therapy Assistant (OTA) and provides a strong foundation for continued learning. The Certified Occupational Therapy Assistant functions as a member of the health care team; working under the supervision of a licensed Occupational Therapist, the Occupational Therapy Assistant helps disabled people of all ages acquire, improve, or regain the ability to do all activities that have meaning, value, or purpose. The OTA curriculum combines biological and behavioral sciences, along with the theory and principles of Occupational Therapy. The program is built to support the standards of the American Occupational Therapy Association and prepares students to sit for the National Board Certification for Occupational Therapy Assistant Exam. The Crowder College Occupational Therapy Assistant Program has applied for accreditation and has been granted Developing Program Status by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, Suite 200, Bethesda, MD 20814-3449. ACOTE's telephone number c/o AOTA is (301) 652-AOTA. Once accreditation of the program has been obtained, its graduates will be eligible to sit for the national certification examination for the occupational therapy assistant administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be a Certified Occupational Therapy Assistant (COTA). In addition, most states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT Certification Examination. Note that a felony conviction may affect a graduate's ability to sit for the NBCOT certification examination or attain state licensure.

The Occupational Therapy faculty believes all humans learn: the way an individual responds to and uses the stimuli in their environment determines how and what is learned. The Occupational Therapy Assistant curriculum is delivered through the uses of multiple learning styles and a wide variety of teaching methods. The OTA program is a single entry, limited admission program. Students must have and maintain a 2.75 grade point average. No courses below a grade of C will be accepted. Applications for the OTA program are accepted April 15th – August 1st of each year.

Program of Study

Orientation		1 hour	
COLL	101		
Communications		6 hours	
Written Communications (3 hours)			
ENGL	101*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		3 hours	
ART	101, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 111
FREN	101	TA	205
Mathematics		3 hours	
MATH	125*, 130*, 135*		
Science		10 hours	
BIOL	152*		
BIOL	252*		
Social and Behavioral Science		6 hours	
PSYC	101		
Civics (3 hours)			
HIST	106*, 107*		
PLSC	103		
OTA Courses		44 hours	
OTA	101	OTA	221*
OTA	116	OTA	228*
OTA	125	OTA	236*
OTA	131*	OTA	240*
OTA	201*	OTA	245*
OTA	211*	OTA	250*
OTA	218*		
Required Online Course		0 hour	
CVCS	101 Missouri Higher Ed Civics Examination		

*Prerequisite required

This Suggested Plan of Study is based on course offerings at the Webb City Instructional Site. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

Suggested Plan of Study

FIRST YEAR

Pre-Admission Requirements: Must be completed prior to the spring semester –

Fall Semester		Hours
BIOL	152 Human Anatomy and Physiology I	5
COLL	101 College Orientation	1
COMM	104 Fundamentals of Speech	3
ENGL	101 English Composition	3
PSYC	101 General Psychology	3
TOTAL		15

Spring Semester		Hours
BIOL	252 Human Anatomy and Physiology II	5
OTA	101 Prins of Occupational Therapy	2
OTA	116 Prins of Therapeutic Intervention	3
OTA	125 Occupational Therapy Documentation	2
Approved Humanities Course		3
TOTAL		15

Summer Semester		Hours
Approved Civics Course		3
Approved Mathematics Course		3
TOTAL		6

SECOND YEAR

Fall Semester		Hours
OTA	131 Functional Mvmt: Occ & Adaptation	3
OTA	201 Practice: Children & Adolescents	5
OTA	211 Practice: Mental Health	4
TOTAL		12

Spring Semester		Hours
OTA	218 Occupational Therapy Test & FW Prep	1
OTA	221 Practice: Physical Rehabilitation	5
OTA	228 Occ Performance Across Lifespan	3
OTA	236 Occ Perf Issues in Later Adulthood	4
TOTAL		13

THIRD YEAR

Fall Semester		Hours
OTA	240 Fieldwork level II A	5
OTA	245 Occupational Therapy Management	2
OTA	250 Fieldwork level II B	5
TOTAL		12

TOTAL HOURS REQUIRED 73



ASSOCIATE OF SCIENCE DEGREE

Occupational Therapy Assistant

General Education Core			Done	Curr	To do				Done	Curr	To do
Orientation			1 hour			73 hours					
	COLL	101									
Communications			6 hours								
Written Communications (3 hours)						Oral Communications (3 hours)					
	ENGL	101				COMM	104*				
Humanities			3 hours								
	ART	101, 106				HIST	101*, 102*				
	ASL	101, 102*				MJSC	101				
	ENGL	109*, 222*, 225*				PHIL	101*, 121, 201*, 202*				
	ENGL	230*, 235*, 240*, 245*				SPAN	101, 111				
	FREN	101				TA	205				
Mathematics			3 hours								
	MATH	125*, 130*, 135*									
Science			10 hours								
	BIOL	152*									
	BIOL	252*									
Social and Behavioral Science			6 hours								
Civics (3 hours)						Additional 3 hours					
	HIST	106*				PSYC	101				
	HIST	107*									
	PLSC	103*, 104*									
OTA Courses			44 hours								
OTA 101	Principles of Occ Therapy (2)					OTA 221	Prin of OT Practice: Phys Rehab* (5)				
OTA 116	Principles of Therapeutic Interventions (3)					OTA 228	Occ Perf Across the Lifespan*(3)				
OTA 125	OT Documentation (2)					OTA 236	Occ Perf Issues in Later Adulthood*(4)				
OTA 131	Functional Movement: Occ and Adapt* (3)					OTA 240	240 Fieldwork Level II - A* (5)				
OTA 201	Prin of OT Practice: Child and Adol* (5)					OTA 245	OT Management* (2)				
OTA 211	Prin of OT Practice: Mental Health* (4)					OTA 250	250 Fieldwork Level II - B* (5)				
OTA 218	OT Test & Fieldwork Prep* (1)										
Required Online Course			0 hour								
CVCS	101 Missouri Higher Ed Civics Exam										

Advanced Emergency Medical Technician (AEMT) Certificate

The Advanced Emergency Medical Technician (AEMT) certificate program is designed for the professional AEMT positions in Emergency Medical Services and prepares graduates to sit for the NREMT AEMT certification exams. Must be at least 18 years old, hold a current NREMT and/or state license at the EMT level, valid AHA Healthcare provider level CPR card, verification of immunization history, physical examination, criminal background check and ACT of 18 or higher (or equivalent).

Program of Study

AEMT Courses		18 hours
AEMT 125*	Introduction to Advanced EMS Practice (2)	
AEMT 130*	Human Anatomy, Physiology and Pathophysiology (2)	
AEMT 135*	Pharmacology, Vascular Access and Medication Administration for the AEMT (3)	
AEMT 140*	Medical Emergencies (4)	
AEMT 145*	Trauma Emergencies and Special Challenges (3)	
AEMT 150*	Advanced Clinical Practice (4)	

Suggested Plan of Study

Fall Semester		Hours
AEMT 125	Intro to Adv. EMS Practice	2
AEMT 130	Human Ana, Phys, & Path	2
AEMT 135	Pharm, Vas Access & Med Admin	3
AEMT 140	Medical Emergencies	4
TOTAL		11
Spring Semester		Hours
AEMT 145	Trauma Emerg & Special Challenges	3
AEMT 150	Advanced Clinical Practice	4
TOTAL		7
Total Hours Required		18

*Prerequisite requirement



CERTIFICATE AEMT

		Done	Curr	To do	
Major Courses	18 Hours				
AEMT	125* Intro to AEMS Practice (2)	_____	_____	_____	
AEMT	130* Human Anat., Phys., & Path. (2)	_____	_____	_____	
AEMT	135* Pharmacology, Vascular Access & Medication Admin. (3)	_____	_____	_____	
AEMT	140* Medical Emergencies (4)	_____	_____	_____	
AEMT	145* Trauma Emergencies & Special Challenges (3)	_____	_____	_____	
AEMT	150* Advanced Clinical Practice (4)	_____	_____	_____	

Paramedic Certificate Paramedical Science AAS

The Paramedical Science degree is designed for the professional paramedic positions in Emergency Medical Services. The accompanying certificate is designed to be offered over two semesters. This program prepares graduates to sit for the Paramedic certification exam. EMT licensure and admission to the program are prerequisites for this degree.

The Paramedic certificate is designed for the professional paramedic positions in Emergency Medical Services. The certificate is designed to be offered over two semesters. This program prepares graduates to sit for the Paramedic certification exam.

Program of Study

Paramedic Certificate Courses		42 hours
EMTP	225 (9)	
EMTP	230* (9)	
EMTP	235* (9)	
EMTP	240* (9)	
EMTP	250* (6)	
Orientation		1 hour
COLL	101	
Communications		9 hours
Written Communications (6 hours)		
ENGL	101*	
ENGL	102*, 203*	
Oral Communications (3 hours)		
COMM	104*	
Mathematics		3 hours
MATH	125*, 130*, 135*	
Civics		3 hours
HIST	106*, 107*	
PLSC	103*	
Science		8 hours
BIOL	101, 152*	
CHEM	101	
CHEM	104 (Recommended)	
Office Administration Courses		3 hours
OA	215 (3)	
Required Online Course		0 hour
CVCS	101 Missouri Higher Ed Civics Examination	

*Prerequisite requirement

Suggested Plan of Study

FIRST YEAR

Fall Semester		Hours
EMTP	225 EMT – Paramedic (1 st 8 weeks)	9
EMTP	230 EMT – Paramedic (2 nd 8 weeks)	9
TOTAL		18

Spring Semester		Hours
EMTP	235 EMT – Paramedic (1 st 8 weeks)	9
EMTP	240 EMT – Paramedic (2 nd 8 weeks)	9
TOTAL		18

Summer Semester (Optional)		Hours
EMTP	250 EMT – Paramedic Capstone	6
TOTAL		6

Graduate with Paramedic Certificate

SECOND YEAR

Fall Semester		Hours
BIOL	101 – OR – BIOL 152	5
COLL	101 College Orientation	1
EMTP	250 EMT – Paramedic Capstone (Optional)	6
ENGL	101 English Composition I	3
OA	215 Medical Terminology	3
Approved Mathematics Course		3
TOTAL		15-21

Spring Semester		Hours
CHEM	104 Chemistry for Health Sciences	4
COMM	104 Fundamentals of Speech	3
EMTP	250 EMT – Paramedic Capstone (Optional)	6
ENGL	102 – OR – ENGL 203	3
Approved Civics Course		3
TOTAL		13-19

Graduate with Paramedical Science AAS

Total Paramedic Certificate Hours Required	42
Additional Hours Needed for AAS	28
Total AAS Hours Required	69-70

EMTP 250 can be taken any semester after completion of the paramedic courses, but only needs to be taken one time.

Courses for Certificate	
Additional Courses for AAS Degree	



CERTIFICATE Paramedic

Done Curr To do

Major Courses	42 Hours				
EMTP 225 Paramedic (9)		___	___	___	
EMTP 230* Paramedic (9)		___	___	___	
EMTP 235* Paramedic (9)		___	___	___	
EMTP 240* Paramedic (9)		___	___	___	
EMTP 250* Paramedic Capstone (6)		___	___	___	
Prerequisites: EMT licensure and admission to the Paramedic program are prerequisites for this program.					
Comments: _____					
Signature: _____ Date: _____					



ASSOCIATE OF APPLIED SCIENCE DEGREE Paramedical Science

				Done	Curr	To do					Done	Curr	To do
Orientation		1 hour							69 hours				
	COLL	101		___	___	___					___	___	___
Communications		9 hours											
		Written Communications (6 hours)							Oral Communications (3 hours)				
	ENGL	101*		___	___	___	COMM	104*			___	___	___
	ENGL	102*, 104*		___	___	___					___	___	___
	ENGL	203*		___	___	___					___	___	___
Mathematics		3 hours											
	MATH	125*		___	___	___					___	___	___
	MATH	130*		___	___	___					___	___	___
	MATH	135*		___	___	___					___	___	___
Science		8 hours					CHEM	104 (Recommended)			___	___	___
	BIOL	101, 152*		___	___	___					___	___	___
	CHEM	101		___	___	___					___	___	___
Civics		3 hours					PLSC	103*, 104*			___	___	___
	HIST	106*		___	___	___					___	___	___
	HIST	107*		___	___	___					___	___	___
Paramedic Courses		42 hours											
	EMTP	225 (9)		___	___	___					___	___	___
	EMTP	230* (9)		___	___	___					___	___	___
	EMTP	235* (9)		___	___	___					___	___	___
	EMTP	240* (9)		___	___	___					___	___	___
	EMTP	250* (6)		___	___	___					___	___	___
Support Courses		3 hours											
	OA	215 Medical Terminology (3)		___	___	___					___	___	___
Required Online Course													
	CVCS	101 Missouri Higher Ed Civics Exam		___	___	___					___	___	___

CERTIFICATE

PCT

Patient Care Technician Certificate

This certificate program prepares students for employment as a Patient Care Technician (PCT) by developing in students the personal traits and professional skills required to perform as competent entry-level PCT in the hospital setting beyond the training of CNA. Students must earn 16 hours for this certificate.

Program of Study

<i>PCT Major Courses</i>	<i>16 hours</i>
CNA 101 CNA Techniques (5)	
CNA 102 CNA Clinical Experience (2)	
ALLH 106 Phlebotomy (3)	
ALLH 107 EKG (3)	
ALLH 110 Patient Care Tech (3)	

Suggested Plan of Study

<i>Fall Semester</i>	<i>Hours</i>
CNA 101 CNA Techniques	5
CNA 102 CNA Clinical Experience	2
TOTAL	7
<i>Spring Semester</i>	<i>Hours</i>
ALLH 106 Phlebotomy	3
ALLH 107 EKG	3
ALLH 110 Patient Care Tech	3
TOTAL	9
Total Hours Required	16



CERTIFICATE

Patient Care Technician

		Done	Curr	To do					
Major Courses		16 Hours							
	CNA	101 CNA Techniques (5)	_____	_____	_____				
	CNA	102 CNA Clinical Experience (2)	_____	_____	_____				
	ALLH	106 Phlebotomy (3)	_____	_____	_____				
	ALLH	107 EKG (3)	_____	_____	_____				
	ALLH	110 Patient Care Tech (3)	_____	_____	_____				

Pharmacy Technician Certificate

This certificate program prepares students for employment as Pharmacy Technicians with medical and office skills helpful for initial placement in pharmacy settings and other related occupations; and students have a career path into the Health Care Specialist AAS. Basic communication, computer/Internet skills, ethics and core courses in pharmacy will be completed.

Program of Study

Pharmacy Tech Major Courses			16 hours
BSAD	125	Bus Computer Apps (3) – OR – BSAD 115	
COLL	101	College Orientation (1)	
PHAR	101*	Pharmacy Techniques I (3)	
PHAR	102*	Pharmacy Techniques II (3)	
PHAR	110	Pharmacology Concepts (3)	
PHAR	150	Pharmacy Tech Internship* (3)	

*Prerequisite requirement

Suggested Plan of Study

FIRST YEAR				
Spring Semester				Hours
BSAD	125	– OR – BSAD 115 (Pharmacy)		3
COLL	101	College Orientation		1
PHAR	101	Pharmacy Techniques I (Pharmacy)		3
PHAR	102	Pharmacy Techniques II (Pharmacy)		3
PHAR	110	Pharmacology Concepts (Pharmacy)		3
PHAR	150	Pharmacy Tech Internship (Pharmacy)		3
TOTAL				16
Total Hours Required				16



CERTIFICATE **Pharmacy Technician**

Students must earn 16 hours for this certificate.

							Done	Curr	To do				Done	Curr	To do	
Orientation				1 hour												
COLL	101	College Orientation (1)														
Major Courses				15 hours						OR BSAD 115 (3)						
BSAD	125	Computer Applications (3)														
PHAR	101	Pharmacy Techniques I* (3)														
PHAR	102	Pharmacy Techniques II* (3)														
PHAR	110	Pharmacology Concepts (3)														
PHAR	150	Pharmacy Tech Internship* (3)														
Certification Component																
Passing a national certification exam is not a requirement for obtaining this certificate or for job placement. However, a national certification exam must be taken as part of the program.																

Photography AA

This multi-disciplinary program encompasses the wide variety of career options in the field of photography. Options include photojournalism, fine art photography, and commercial endeavors, which include products, portraiture, and events such as weddings. Photographers can work for an employer, own their own business, and/or work as freelancers.

Program of Study

Orientation		1 hour	
COLL	101		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101#, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		3 hours	
MATH	125*#, 130*, 135*		
Science		7 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
Lab		Non-Lab	
BIOL	101, 110, 120	BIOL	102
BIOL	152*	PHYS	102
CHEM	101, 104, 111*	PHYS	105
GEOL	115, 210*		
PHYS	101, 190*		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Civics (3 hours)			
HIST	106*, 107*	ECON	201*, 202*
PLSC	103*	GEOG	111
		PSYC	101, 211*
		SOC	101
GE CORE Electives		5 hours	
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study			
Major Courses		18 hours	
Required Courses (9 hours)			
ART	191 GD II	COMM	231* Photocomm II
COMM	220 Photocomm I		
Approved Electives (9 hours)			
ART	103	COMM	150*
BSAD	150	COMM	171-173
BMGT	200	COMM	225*
COMM	111*		
Required Online Course		0 hour	
CVCS	101 Missouri Higher Ed Civics Examination		

Suggested Plan of Study

FIRST YEAR

Fall Semester			Hours
ART	191	Graphic Design II	3
COLL	101	College Orientation	1
COMM	104	Fundamentals of Speech	3
COMM	220	Photocommunication I	3
ENGL	101	English Composition	3
MATH	125	Quantitative Reasoning	3
TOTAL			16

Spring Semester			Hours
ART	101	Art Appreciation	3
COMM	231	Photocommunication II	3
ENGL	102	Advanced English Comp	3
Approved Photography Elective			3
Approved Soc & Behavioral Science Course			3
TOTAL			15

SECOND YEAR

Fall Semester			Hours
Approved Civics Course			3
Approved GE Core Elective			3
Approved Humanities Course			3
Approved Photography Elective			3
Approved Science Course			3-5
TOTAL			15-17

Spring Semester			Hours
Approved GE Core Elective			2
Approved Humanities Course			3
Approved Photography Elective			3
Approved Science Course			3-5
Approved Social Science Course			3
TOTAL			14-16

TOTAL HOURS REQUIRED 60-64

*Prerequisite required

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

- Preferred class for this degree option



ASSOCIATE OF ARTS DEGREE

Photography

General Education Core			Done	Curr	To do				Done	Curr	To do
Orientation			1 hour						61 hours		
	COLL	101									
Communications			9 hours								
	Written Communications (6 hours)						Oral Communications (3 hours)				
	ENGL	101*					COMM	104*			
	ENGL	102*, 104*									
Humanities			9 hours								
	ART	101 (Recommended)					HIST	101*, 102*			
	ART	106					MUSC	101			
	ASL	101, 102*					PHIL	101*, 121, 201*, 202*			
	ENGL	109*, 222*, 225*					SPAN	101, 102*			
	ENGL	230*, 235*, 240*, 245*					TA	205			
	FREN	101									
Mathematics			3 hours								
	MATH	125* (Recommended)					MATH	130*, 135*			
Science			7 hours								
	Lab						Non-Lab				
	BIOL	101, 110, 120					BIOL	102			
	BIOL	152*					PHYS	102			
	CHEM	101, 104, 111*					PHYS	105			
	GEOL	115, 210*									
	PHYS	101, 190*									
Social and Behavioral Science			9 hours								
	Civics (3 hours)										
	HIST	106*					ECON	201*, 202*			
	HIST	107*					GEOG	111			
	PLSC	103*, 104*					PSYC	101, 211*			
							SOC	101			
GE Core Electives			5 hours								
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study.											
Major Courses			18 hours								
	Required Courses (9 hours)						Approved Electives (9 hours)				
	ART	191 Graphic Design II (3)					ART	103 Intro to 2-D Design (3)			
	COMM	220 Photocommunication I (3)					BSAD	150 Intro to Business (3)			
	COMM	231 Photocommunication II* (3)					BMGT	200 Marketing (3)			
							COMM	111 Magazine Prod I* (3)			
							COMM	150 Intro to Journalism* (3)			
							COMM	171-173 Topics in Communication (1-3)			
							COMM	225 Internship* (3)			
Required Online Course			0 hour								
	CVCS	101 MO Higher Ed Civics Exam									

Physical Education AA

Most successful Physical Education majors have a strong interest in general health, physical fitness, and sports. A desire to work with young people in their overall development is essential for success in this field. Students who transfer and complete a Bachelor of Science in Physical Education can find job opportunities in teaching, coaching, recreation, athletic training, and health promotion and wellness. Students seeking teaching/coaching careers in public schools must meet state certification requirements. The following program is suggested for students who intend to transfer following graduation. For best transfer, students should contact the four-year institution to which they plan to transfer as early in the program as possible.

Program of Study

Orientation		1 hour	
COLL	101		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		3 hours	
MATH	125*#, 130*, 135*		
Science		7 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
Lab			
BIOL	101#, 110, 120		
BIOL	152*		
CHEM	101, 104, 111*		
GEOL	115, 210*		
PHYS	101#, 190*		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Civics (6 hours)			
HIST	106*#, 107*	ECON	201*, 202*
PLSC	103*#, 104*#	GEOG	111
		PSYC	101#, 211*
		SOC	101
GE CORE Electives		5 hours	
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study			
Major Courses		13 hours	
PE	113	PE	142
PE	115	PE	150
PE	120	PE	160, 260
PE	125		
PE Activities Classes (2 one hour classes maximum)			
Approved Electives (6-8 hours)			
BIOL	152*	PSYC	211*
EDUC	125#, 231*#		
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

Suggested Plan of Study

FIRST YEAR

Fall Semester		Hours
COLL	101 College Orientation	1
ENGL	101 English Composition	3
MATH	125 Quantitative Reasoning	3
PE	115 First Aid (Fall Only)	2
PSYC	101 General Psychology	3
Approved Humanities Course		3
TOTAL		15

Spring Semester		Hours
BIOL	101 General Biology	4
ENGL	102 Advanced English Comp	3
HIST	106 U.S. History I	3
PE	125 Athletic Training (Spring Only)	2
PE	142 Personal & Community Health	3
TOTAL		15

SECOND YEAR

Fall Semester		Hours
EDUC	231 Educational Psychology	3
ENGL	109 Intro to Literature	3
PE	120 Intro to PE (Fall Only)	2
PHYS	101 Survey of Phys. Science	4
Approved GE Core Elective		2
Approved PE Elective		2
TOTAL		16

Spring Semester		Hours
COMM	104 Fundamentals of Speech	3
PE	113 Lifetime Fitness & Wellness	2
PE	260 Coaching Methods II (Spring Only)	2
PLSC	103 Nat, State, Local Gov't	3
Approved GE Core Elective		3
Approved Humanities Course		3
TOTAL		16

TOTAL HOURS REQUIRED 62

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

*Prerequisite required

- Preferred class for this degree option



ASSOCIATE OF ARTS DEGREE

Physical Education

General Education Co		62 hours	Done	Curr	To do	Done	Curr	To do
Orientation		1 hour						
	COLL 101							
Communications		9 hours						
	Written Communications (6 hours)							
	ENGL 101*							
	ENGL 102*, 104*							
	Oral Communications (3 hours)							
	COMM 104*							
Humanities		9 hours						
	ART 101, 106							
	ASL 101, 102*							
	ENGL 109*, 222*, 225*							
	ENGL 230*, 235*, 240*, 245*							
	FREN 101							
	HIST 101*, 102*							
	MUSC 101							
	PHIL 101*, 121, 201*, 202*							
	SPAN 101, 102*							
	TA 205							
Mathematics		3 hours						
	MATH 125* (Recommended)							
	MATH 130*, 135*							
Science		7 hours						
	Lab							
	BIOL 101 (Recommended)							
	BIOL 110, 120, 152*							
	CHEM 101, 104, 111*							
	GEOL 115, 210*							
	PHYS 101 (Recommended), 190*							
Social and Behavioral Science		9 hours						
	Civics (6 hours)							
	HIST 106* (Recommended), 107*							
	PLSC 103* (Recommended), 104*#							
	ECON 201*, 202*							
	GEOG 111							
	PSYC 101 (Recommended), 211*							
	SOC 101							
GE Core Electives		5 hours						
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study.								
Major Courses		13 hours						
	PE 113 Lifetime Wellness (2)							
	PE 115 First Aid (2)							
	PE 120 Intro to Phys Educ (2)							
	PE 125 Athletic Training (2)							
	PE 142 Personal & Comm Health (3)							
	PE 150 Sport Psych (2)							
	PE 160 or 260 Coaching Methods (2)							
	PE Activities classes (2 one-hour classes maximum)							
	List below:							
Approved Electives 6-8 hours								
	BIOL 152 Anat & Phys I (5)							
	EDUC 125 Intro to Education (3) (Recommended)							
	EDUC 231 Educ Psych* (3) (Recommended)							
	PSYC 211 Lifespan Development* (3)							
Required Online Course		0 hour						
	CVCS 101 MO Higher Ed Civics Exam							

Physics AA

Instruction in the Physical Sciences is offered in the areas of chemistry, physics, geology, and astronomy as the foundation for baccalaureate and graduate studies in these and related sciences at a university or four-year college. Physical Science students find employment in industrial research and development, government regulatory agencies, or secondary and post-secondary education. Each suggested curriculum that follows assumes a mathematics background that will permit an enrollment in the calculus series as a freshman. If pre-calculus classes are needed, more than four semesters may be necessary to complete this program.

Program of Study

Orientation		1 hour	
COLL	101		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		5 hours	
MATH	150*#, 160*#		
Science		10 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
Lab		Non-Lab	
BIOL	101, 110, 120	BIOL	102
BIOL	152*	PHYS	105
CHEM	101, 104, 111*		
GEOL	115, 210*		
PHYS	101, 190*# (Required)		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Civics (3 hours)			
HIST	106*, 107*	ECON	201*, 202*
PLSC	103*	GEOG	111
		PSYC	101, 211*
		SOC	101
GE CORE Electives		5 hours	
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study			
Major Courses		22 hours	
COMP	111*	MATH	210*
MATH	201*	PHYS	210*
MATH	202*		
Other Recommended Courses			
CHEM	111*	CHEM	112*
Any classes in Alternative Energy			
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

- Preferred class for this degree option

Suggested Plan of Study

FIRST YEAR

Fall Semester		Hours
COLL	101 College Orientation	1
COMM	104 Fundamentals of Speech	3
COMP	111 Intro to Programming	4
ENGL	101 English Composition I	3
MATH	150 Calculus I, Part 1	2
	Approved Civics Course	3
TOTAL		16

Spring Semester		Hours
ENGL	102 English Composition II	3
MATH	160 Calculus I, Part 2	3
PHYS	190 General Physics I	5
	Approved GE Core Elective	5
	Approved Humanities Course	3
TOTAL		19

SECOND YEAR

Fall Semester		Hours
MATH	201 Calculus II	5
PHYS	210 General Physics II	5
	Approved Humanities Course	3
	Approved Soc & Behavioral Science Course	3
TOTAL		16

Spring Semester		Hours
MATH	202 Calculus III	5
MATH	210 Differential Equations	3
	Approved Humanities Course	3
	Approved Science Course	3-4
	Approved Soc & Behavioral Science Course	3
TOTAL		17-18

TOTAL HOURS REQUIRED 68-69

*Prerequisite required

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.



ASSOCIATE OF ARTS DEGREE

Physics

General Education Core			Done	Curr	To do			Done	Curr	To do
Orientation			1 hour					69 hours		
	COLL	101								
Communications			9 hours							
	Written Communications (6 hours)							Oral Communications (3 hours)		
	ENGL	101*						COMM	104*	
	ENGL	102*, 104*								
Humanities			9 hours							
	ART	101, 106						HIST	101*, 102*	
	ASL	101, 102*						MUSC	101	
	ENGL	109*, 222*, 225*						PHIL	101*, 121, 201*, 202*	
	ENGL	230*, 235*, 240*, 245*						SPAN	101, 102*	
	FREN	101						TA	205	
Mathematics			5 hours							
	MATH	150* & 160* (Required)						MATH	125*, 130*, 135*	
Science			10 hours							
	Lab							Non-Lab		
	BIOL	101, 110, 120						BIOL	102	
	BIOL	152*						PHYS	105	
	CHEM	101, 104, 111*								
	GEOL	115, 210*								
	PHYS	101								
	PHYS	190* (Required)								
Social and Behavioral Science			9 hours							
	Civics (3 hours)									
	HIST	106*						ECON	201*, 202*	
	HIST	107*						GEOG	111	
	PLSC	103*, 104*						PSYC	101, 211*	
								SOC	101	
GE Core Electives			5 hours							
Any additional 5 credit hours from courses listed above.										
Courses cannot be used as Core electives if counted under another section of this Program of Study.										
Major Courses			22 hours							
	COMP	111 Intro to Computer Sci* (4)						Additional Recommended Classes		
	MATH	201 Calculus II* (5)						CHEM	111 Gen Chemistry I* (5)	
	MATH	202 Calculus III* (5)						CHEM	112 Gen Chemistry II* (5)	
	MATH	210 Diff Equations* (3)						Any classes in Alternative Energy		
	PHYS	210 Gen Physics II* (5)								
Required Online Course			0 hour							
	CVCS	101 MO Higher Ed Civics Exam								

Pre-Engineering AS

The Associate in Science (A.S.) Pre-Engineering degree is a cooperative program between Crowder College and the School of Engineering at the Missouri University of Science & Technology. In addition, similar cooperative programs have been developed with the University of Missouri - Columbia and the University of Arkansas. Although not specifically designed for transfer to other engineering schools, the A.S. program does incorporate the essential course work for the first two years of study in any engineering field at other universities. Some of the course requirements vary with the engineering departments cooperating in this program. Those requirements are marked with a (†). In such cases, students will need to consult with the adviser as to the appropriate class for a particular engineering major.

Crowder College and the School of Engineering at Missouri University of Science & Technology have instituted an advisement and counseling program for pre-engineering majors. Students enrolling at Crowder can be simultaneously enrolled at Missouri S&T's Transfer Assistance Program. This allows for a smoother transition between the two institutions. Students are also allowed to participate in special pre-registration programs on the Missouri S&T campus.

Crowder College offers two degree programs in pre-engineering. The A.S. Pre-Engineering degree is designed for those students who plan to enter into traditional engineering fields such as Mechanical, Electrical, Civil, etc. Grades below a "C" are not allowed.

Program of Study

Orientation		1 hour	
COLL	101		
Communications †		6 hours	
ENGL	101*		
ENGL	102*		
COMM	104*		
Humanities †		3 hours	
ART	101, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		18 hours	
MATH	150*	MATH	202*
MATH	160*	MATH	210*
MATH	201*		
Science		18 hours	
PHYS	190*	PHYS	250*
PHYS	210*	CHEM	111*
Social and Behavioral Science †		9 hours	
Civics (3 hours)		Additional 3 hours	
HIST	106*, 107*	ECON	201*, 202*
PLSC	103	GEOG	111
Economics (3 hours)		PSYC	101, 211*
ECON	201*, 202*	SOC	101
Computer Science		4 hours	
COMP	111*		
Technical Electives		5 hours	
AMT	102	CONS	141*
AMT	122	CONS	155*
CHEM	112*	DRFT	101
CHEM	201*	DRFT	115
CNS	101	DRFT	141*
CNS	121	DRFT	153*
CNS	131*	DRFT	215*
Required Online Course		0 hour	
CVCS	101 Missouri Higher Ed Civics Examination		

Suggested Plan of Study

FIRST YEAR			
Fall Semester			Hours
CHEM 111	General Chemistry I		5
COLL 101	College Orientation		1
COMP 111	Introduction to Programming		4
ENGL 101	English Composition I		3
MATH 150	Calculus I, Part 1		2
TOTAL			15
Spring Semester			Hours
ECON 201	– OR – ECON 202		3
MATH 160	Calculus I, Part 2		3
PHYS 190	General Physics I		5
Approved Communications Course			3
Approved Humanities Course			3
TOTAL			17
SECOND YEAR			
Fall Semester			Hours
MATH 201	Calculus II		5
PHYS 210	General Physics II		5
Approved Civics Course			3
Approved Soc & Behavioral Science Course			3
TOTAL			16
Spring Semester			Hours
MATH 202	Calculus III		5
MATH 210	Differential Equations		3
PHYS 250	Statics		3
Approved Technical Electives			5
TOTAL			16
TOTAL HOURS REQUIRED			64

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

- Preferred class for this degree option

*Prerequisite requirement



ASSOCIATE OF SCIENCE DEGREE

Pre-Engineering

			Done	Curr	To do				Done	Curr	To do
Orientation			1 hour			64 hours					
	COLL	101									
Communications			6 hours								
	ENGL	101* (3)									
	ENGL	102*, 104* (3)									
	COMM	104* (3)									
Humanities			3 hours								
	ART	101, 106				HIST	101*, 102*				
	ASL	101, 102*				MUSC	101				
	ENGL	109*, 222*, 225*				PHIL	101*, 121, 201*, 202*				
	ENGL	230*, 235*, 240*, 245*				SPAN	101, 102*				
	FREN	101				TA	205				
Mathematics			18 hours								
	MATH	150 Calculus I Part I* (2)				MATH	202 Calculus III* (5)				
	MATH	160 Calculus I Part II* (3)				MATH	210 Differential Equations* (3)				
	MATH	201 Calculus II* (5)									
Science			18 hours								
	PHYS	190 General Physics I* (5)				PHYS	250 Statics* (3)				
	PHYS	210 General Physics II* (5)				CHEM	111 General Chemistry I* (5)				
Social & Behavioral Science			9 hours								
	Civics (3 hours)					Additional (3 hours)					
	HIST	106*				ECON	201*, 202*				
	HIST	107*				GEOG	111				
	PLSC	103*, 104*				PSYC	101, 211				
	Economics (3 hours)					SOC	101				
	ECON	201*, 202*									
Computer Science			4 hours								
	COMP	111 Intro to Computer Sci* (4)									
Technical Electives			5 hours								
	AMT	102 (3)				CONS	141* (3)				
	AMT	122 (3)				CONS	155* (3)				
	CHEM	112* (5)				DRFT	101 (3)				
	CHEM	201* (5)				DRFT	115 (3)				
	CNS	101 (3)				DRFT	141* (3)				
	CNS	121 (3)				DRFT	153* (3)				
	CNS	131* (3)				DRFT	215* (3)				
Required Online Course			0 hour								
	CVCS	101 MO Higher Ed Civics Exam									
CHEM 112 required for Chem Engineering majors											

Pre-Medicine AA

This program provides introductory courses for students interested in application to a college of medicine. Students should consult their advisors, as well as the institution to which they intend to transfer to finish their prerequisites, to ensure that their course selections are appropriate. Prerequisite requirements for the college of medicine of interest should also be considered.

Program of Study

Orientation		1 hour	
COLL	101		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		3 hours	
MATH	135*		
Science		9 hours	
Lab			
BIOL	101 or 110*		
CHEM	111*		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Civics (3 hours)			
HIST	106*, 107*	ECON	201*, 202*
PLSC	103*	GEOG	111
		PSYC	101, 211*
		SOC	101
GE CORE Electives		5 hours	
BIOL 110 should be used to satisfy the additional 5 credit hours elective requirement. Courses cannot be used as Core electives if counted under another section of this Program of Study			
Major Courses		15 hours	
BIOL	120*	MATH	150*
BIOL	CHEM 112*	MATH	160*
Approved Electives		5 hours	
BIOL	220*		
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

Suggested Plan of Study**FIRST YEAR**

Fall Semester	Hours
BIOL 101 Biology	4
COLL 101 College Orientation	1
ENGL 101 English Composition I	3
MATH 135 Algebra for Calculus	3
Approved Soc & Behavioral Science Course	3
TOTAL	14

Spring Semester	Hours
BIOL 110 General Zoology	5
MATH 150 Calculus 1, Part I	2
MATH 160 Calculus 1, Part II	3
ENGL 102 Advanced English Comp	3
Approved Civics Course	3
Approved Humanities Course	3
TOTAL	19

SECOND YEAR

Fall Semester	Hours
BIOL 120 General Botany	5
CHEM 111 General Chemistry 1	5
Approved Humanities Course	3
Approved Soc & Behavioral Course	3
TOTAL	16

Spring Semester	Hours
BIOL 220 General Microbiology	5
CHEM 112 General Chemistry II	5
COMM 104 Fundamentals of Speech	3
Approved Humanities Course	3
TOTAL	16

TOTAL HOURS REQUIRED 65

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

*Prerequisite required

- Preferred class for this degree option



ASSOCIATE OF ARTS DEGREE

Pre-Medicine

General Education Core			Done	Curr	To do		Done	Curr	To do
Orientation			1 hour			65 hours			
	COLL	101							
Communications			9 hours						
	Written Communications (6 hours)					Oral Communications (3 hours)			
	ENGL	101*				COMM	104*		
	ENGL	102*							
Humanities			9 hours						
	ART	101, 106				HIST	101*, 102*		
	ASL	101, 102*				MUSC	101		
	ENGL	109*, 222*, 225*				PHIL	101*, 121, 201*, 202*		
	ENGL	230*, 235*, 240*, 245*				SPAN	101, 102*		
	FREN	101				TA	205		
Mathematics			3 hours						
	MATH	135*							
Science			9 hours						
	Lab								
	BIOL	101 or 110*							
	CHEM	111*							
Social and Behavioral Science			9 hours						
	Civics (3 hours)								
	HIST	106*				ECON	201*, 202*		
	HIST	107*				GEOG	111		
	PLSC	103*				PSYC	101, 211*		
						SOC	101		
GE Core Electives			5 hours						
BIOL 110 should be used to satisfy the additional 5 credit hours elective requirement. Courses cannot be used as Core electives if counted under another section of this Program of Study.									
Major Courses			15 hours						
	Required Courses (10 hours)								
	BIOL	120 Gen Botany* (5)							
	CHEM	112 General Chem II* (5)							
	MATH	150 Calculus 1, Part I* (2)							
	MATH	160 Calculus 1, Part II* (3)							
Approved Electives			5 hours						
	BIOL	220* General Microbiology							
Required Online Course			0 hour						
	CVCS	101 MO Higher Ed Civics Exam							

Preschool Teacher/Paraprofessional AA

The Preschool Teacher/Paraprofessional Program is designed for individuals who need an associate degree in early childhood. Graduates are prepared to continue as an early childhood teacher at Head Start, as a paraprofessional in a P-12 setting, an Autism assistant, or in a private institution. If the student prefers to pursue a BA, the student will have completed the general education requirements and the 18 hours in the major which include courses that are transferable to several four-year institutions in our area. Students must have a cleared background check letter before completing any observation in schools.

Program of Study

Orientation		1 hour	
COLL	101		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101#, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101#
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		3 hours	
MATH	125* #, 130*, 135*		
Science		7 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
	Lab		Non-Lab
BIOL	101#, 110, 120	BIOL	102
BIOL	152*	PHYS	105
CHEM	101, 104, 111*		
GEOL	115, 210*		
PHYS	101#, 190*		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Civics (3 hours)			
HIST	106*, 107*	ECON	201*, 202*
PLSC	103*	GEOG	111
		PSYC	101#, 211*
		SOC	101#
GE CORE Electives		5 hours	
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study			
Major Courses		18 hours	
ECD	101 OR EDUC 125	PSYC	203
ECD	103	PSYC	204
ECD	201*	PSYC	211*
ECD	203* OR EDUC 251	PSYC	290
EDUC	206*		
Students with the Child Development Associate (CDA) national credential or the Pre-Professional Assessment and Certification in Early Childhood Education through American Association of Family and Consumer Sciences will be credited with completed ECD 101 and ECD 103.			
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

Suggested Plan of Study

FIRST YEAR

Fall Semester		Hours
COLL	101 College Orientation	1
ENGL	101 English Composition I	3
PSYC	101 General Psychology	3
Approved Science Course		3-5
Major Course		3
TOTAL		13-15

Spring Semester		Hours
ENGL	102 English Composition II	3
MATH	125 Quantitative Reasoning	3
SOC	101 General Sociology	3
Approved Civics Course		3
Major Course		3
TOTAL		15

SECOND YEAR

Fall Semester		Hours
COMM	104 Fundamentals of Speech	3
PHYS	101 Survey of Physical Science	3-5
Approved GE Core Elective		3
Approved Humanities Course		3
Major Course		3
TOTAL		15-17

Spring Semester		Hours
Approved GE Core Elective		2
Approved Humanities Course		3
Approved Humanities Course		3
Major Course		3
Major Course		3
Major Course		3
TOTAL		17

TOTAL HOURS REQUIRED 60-64

*Prerequisite required

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

- Preferred class for this degree option



ASSOCIATE OF ARTS DEGREE

Preschool Teacher/Paraprofessional

General Education Core				Done	Curr	To do					Done	Curr	To do	
Orientation		1 hour					61 hours							
	COLL	101												
Communications		9 hours												
		Written Communications (6 hours)					Oral Communications (3 hours)							
	ENGL	101*					COMM	104*						
	ENGL	102*, 104*												
Humanities		9 hours												
	ART	101#, 106					HIST	101*, 102*						
	ASL	101, 102*					MUSC	101#						
	ENGL	109*, 222*, 225*					PHIL	101*, 121, 201*, 202*						
	ENGL	230*, 235*, 240*, 245*					SPAN	101, 102*						
	FREN	101					TA	205						
Mathematics		3 hours												
	MATH	125* (Recommended)					MATH	130*, 135*						
Science		7 hours												
	Lab						Non-Lab							
	BIOL	101#, 110, 120					BIOL	102						
	BIOL	152*					PHYS	105						
	CHEM	101, 104, 111*												
	GEOL	115, 210*												
	PHYS	101#, 190*												
Social and Behavioral Science		9 hours												
		Civics (3 hours)												
	HIST	106*					ECON	201*, 202*						
	HIST	107*					GEOG	111						
	PLSC	103*, 104*					PSYC	101, 211*						
							SOC	101 (Recommended)						
GE Core Electives		5 hours												
Any additional 5 credit hours from courses listed above.														
Courses cannot be used as Core electives if counted under another section of this Program of Study.														
Students with the Child Development Associate (CDA) national credential or the Pre-Assessment and Certification in Early Childhood Education through American Association of Family and Consumer Sciences will be credited with completed ECD 101 and ECD 103.														
Major Courses		18 hours												
	ECD	101 Foundations (3)					OR	EDUC 125 Introduction to Education (3)						
	ECD	103 Health and Safety (3)												
	ECD	201 Curriculum* (3)												
	ECD	203 Practicum* (2)					OR	EDUC 251 Teaching Profession* (3)						
	EDUC	206 Literature for Children* (3)												
	PSYC	203 Autism Disorders (3)												
	PSYC	204 Applied Behavior (3)												
	PSYC	211 Lifespan Development (3)												
	PSYC	290 Clinical I (3)												
Required Online Course		0 hour												
	CVCS	101 MO Higher Ed Civics Exam												

Pre-Veterinary Medicine AA

This program provides introductory courses for students interested in application to a college of veterinary medicine. Students should consult their advisors, as well as the institution to which they intend to transfer to finish their prerequisites, to insure that their course selections are appropriate. Prerequisite requirements for the college of veterinary medicine of interest should also be considered.

Program of Study

Orientation		1 hour	
COLL	101 OR AGRI 111		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		3 hours	
MATH	125*, 130*, 135*#		
Science		7 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
Lab		Non-Lab	
BIOL	101, 110#, 120	PHYS	105
BIOL	152*		
CHEM	101, 104, 111*		
GEOL	115, 210*		
PHYS	101, 190*		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Civics (3 hours)			
HIST	106*, 107*	ECON	201*, 202*
PLSC	103*	GEOG	111
		PSYC	101, 211*
		SOC	101
GE CORE Electives		5 hours	
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study			
Major Courses		23 hours	
Required Courses (17 hours)			
ANSC	114	CHEM	112*
BIOL	220*	MATH	112*
Approved Electives (6 hours)			
ANSC	101*	BIOL	120*
ANSC	180*	CHEM	221*
ANSC	213	MATH	150*
ANSC	223	MATH	160*
ANSC	232*	PHYS	190*
ANSC	233	PHYS	210*
Required Online Course		0 hour	
CVCS	101 Missouri Higher Ed Civics Examination		

Suggested Plan of Study

FIRST YEAR

Fall Semester	Hours
AGRI 111 – OR – COLL 101	1
ANSC 114 Animal Science (elective)	4
BIOL 110 General Zoology	5
ENGL 101 English Composition I	3
MATH 135 Algebra for Calculus	3
Approved GE Core Elective	2
TOTAL	18

Spring Semester	Hours
BIOL 220 General Microbiology	5
COMM 104 Fundamentals of Speech	3
ENGL 102 English Composition II	3
MATH 112 Trigonometry	3
Approved Elective(s)	3-5
TOTAL	17-19

SECOND YEAR

Fall Semester	Hours
Approved Elective(s)	3-5
Approved GE Core Elective	3
Approved Humanities Course	3
Approved Science Course	3-5
Approved Soc & Behavioral Science Course	3
TOTAL	15-19

Spring Semester	Hours
CHEM 112 General Chemistry II	5
Approved Civics Course	3
Approved Humanities Course	3
Approved Humanities Course	3
Approved Soc & Behavioral Science Course	3
TOTAL	17

TOTAL HOURS REQUIRED 67-73

*Prerequisite required

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

- Preferred class for this degree option



ASSOCIATE OF ARTS DEGREE

Pre-Veterinary Medicine

General Education Core			Done	Curr	To do	67 hours			Done	Curr	To do
Orientation			1 hour			OR					
	COLL	101				AGRI	111 Ag Career Development				
Communications			9 hours			Oral Communications (3 hours)					
	Written Communications (6 hours)					COMM		104*			
	ENGL	101*									
	ENGL	102*, 104*									
Humanities			9 hours								
	ART	101, 106				HIST	101*, 102*				
	ASL	101, 102*				MUSC	101				
	ENGL	109*, 222*, 225*				PHIL	101*, 121, 201*, 202*				
	ENGL	230*, 235*, 240*, 245*				SPAN	101, 102*				
	FREN	101				TA	205				
Mathematics			3 hours								
	MATH	135* (Recommended)				MATH	125*, 130*				
Science			7 hours			Non-Lab					
	Lab					PHYS		105			
	BIOL	101, 120									
	BIOL	110 (Recommended)									
	BIOL	152*									
	CHEM	101, 104, 111*									
	GEOL	115, 210*									
	PHYS	101, 190*									
Social and Behavioral Science			9 hours								
	Civics (3 hours)					ECON		201*, 202*			
	HIST	106*				GEOG		111			
	HIST	107*				PSYC		101, 211*			
	PLSC	103*, 104*				SOC		101			
GE Core Electives			5 hours								
Any additional 5 credit hours from courses listed above.											
Courses cannot be used as Core electives if counted											
under another section of this Program of Study.											
Major Courses			23 hours			Approved Electives (6 hours)					
	Required Courses (17 hours)					ANSC	101 Livestock Selection* (1)				
	ANSC	114 Animal Science (4)				ANSC	180 Intro to Vet Science* (2)				
	BIOL	220 Gen Microbiology* (5)				ANSC	213 Feeds & Nutrition (3)				
	CHEM	112 Gen Chemistry II* (5)				ANSC	223 Farm Animal Health (3)				
	MATH	112 Trigonometry* (3)				ANSC	232 AI/Animal Reproduct* (3)				
						ANSC	233 Horse Science (3)				
						BIOL	120 General Botany* (5)				
						CHEM	221 Organic & Biochemistry* (5)				
						MATH	150 Calculus I, Part 1* (2)				
						MATH	160 Calculus 1, Part II* (3)				
						PHYS	190 Physics I* (5)				
						PHYS	210 General Physics II* (5)				
Required Online Course			0 hour								
	CVCS	101 MO Higher Ed Civics Exam									

Psychology: General AA

Career opportunities for psychology majors include social work, teaching and counseling. After completion of a baccalaureate degree, graduates often find work with government agencies. An Associate in Arts in Psychology requires completion of the general education core, nine hours in psychology, and Sociology 101.

Program of Study

Orientation		1 hour	
COLL	101		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		3 hours	
MATH	135*	MATH	125*, 130*
Science		7 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
Lab		Non -Lab	
BIOL	101, 110, 120	PHYS	105
BIOL	152*		
CHEM	101, 104, 111*		
GEOL	115, 210*		
PHYS	101, 190*		
Social and Behavioral Science		9 hours	
Civics (3 hours)			
HIST	106*, 107*	ECON	201*, 202*
PLSC	103*	GEOG	111
GE CORE Electives		5 hours	
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study			
Major Courses		12 hours	
PSYC	101	PYSC	213*
PSYC	211	SOC	101
Approved Electives (6 hours)			
EDUC	231*	PSYC	110*
HIST	106*, 107*	PSYC	203
PLSC	103*	PSYC	204
		PSYC	290*
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

Suggested Plan of Study**FIRST YEAR**

Fall Semester	Hours
COLL 101 College Orientation	1
COMM 104 Fundamentals of Speech	3
ENGL 101 English Composition I	3
MATH 135 Algebra for Calculus	3
PSYC 101 General Psychology	3
Approved Civics Course	3
TOTAL	16

Spring Semester	Hours
ENGL 102 English Composition II	3
PSYC 213 Abnormal Psychology	3
Approved Humanities Course	3
Approved Science Course	3-5
Approved Social & Behavioral Science Course	3
TOTAL	15-17

SECOND YEAR

Fall Semester	Hours
PSYC 211 Lifespan Development	3
Approved GE Core Elective	3
Approved Humanities Course	3
Approved Science Course	3-5
Approved Psychology Elective	3
TOTAL	15-17

Spring Semester	Hours
SOC 101 General Sociology	3
Approved GE Core Elective	3
Approved Humanity Course	3
Approved Psychology Elective	3
Approved Social and Behavioral Course	3
TOTAL	15

TOTAL HOURS REQUIRED 61-65

*Prerequisite required

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

- Preferred class for this degree option



ASSOCIATE OF ARTS DEGREE

Psychology

General Education Core				Done	Curr	To do		Done	Curr	To do
Orientation		1 hour						61 hours		
	COLL	101								
Communications		9 hours								
	Written Communications (6 hours)						Oral Communications (3 hours)			
	ENGL	101*					COMM	104*		
	ENGL	102*, 104*								
Humanities		9 hours								
	ART	101, 106					HIST	101*, 102*		
	ASL	101, 102*					MUSC	101		
	ENGL	109*, 222*, 225*					PHIL	101*, 121, 201*, 202*		
	ENGL	230*, 235*, 240*, 245*					SPAN	101, 102*		
	FREN	101					TA	205		
Mathematics		3 hours								
	MATH	135* (Recommended)					MATH	125*, 130*		
Science		7 hours								
	Lab						Non-Lab			
	BIOL	101, 110, 120					PHYS	105		
	BIOL	152*								
	CHEM	101, 104, 111*								
	GEOL	115, 210*								
	PHYS	101, 190*								
Social and Behavioral Science		9 hours								
	Civics (3 hours)									
	HIST	106*					ECON	201*, 202*		
	HIST	107*					GEOG	111		
	PLSC	103*, 104*								
GE Core Electives		5 hours								
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study.										
Required Courses		18 hours								
	Required Courses (12 hours)									
	PSYC	101 General Psych (3)					PSYC	213 Abnormal Psychology (3)		
	PSYC	211 Lifespan Development* (3)					SOC	101 General Sociology (3)		
	Approved Electives (6 hours)									
	EDUC	231 Educational Psych* (3)					PSYC	110 Psych of Pers Adj* (3)		
	HIST	106 U.S. History I* (3)					PSYC	203 Autism Spectrum Disorders (3)		
	HIST	107 U.S. History II* (3)					PSYC	204 Applied Behavior Analysis (3)		
	PLSC	103, 104 Nat, State, & Loc Gov* (3)					PSYC	290 Clinical I* (3)		
Required Online Course		0 hour								
	CVCS	101 MO Higher Ed Civics Exam								

Social Work AA

The Social Work program provides students with an introduction to and a foundation in the field of Social Work. An associate of arts in social work leads to a Bachelor's degree, which paves the way for a job in social work. The following program is suggested for graduation. It is recommended that students contact the transfer institution for its specific Bachelor's degree requirements.

Program of Study

Orientation		1 hour	
COLL	101		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		3 hours	
MATH	125*#, 130*, 135*		
Science		7 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
	Lab		Non-Lab
BIOL	101, 110, 120	PHYS	105
BIOL	152*		
CHEM	101, 104, 111*		
GEOL	115, 210*		
PHYS	101, 190*		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Civics (3 hours)			
HIST	106*, 107*	ECON	201* (Required)
Plus 3 Hours			
PLSC	103*	GEOG	111
GE CORE Electives		5 hours	
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study			
Major Courses		18 hours	
PSYC	101	SWK	200*
PSYC	211*	SWK	221
SOC	101	SWK	230
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

Suggested Plan of Study

FIRST YEAR

Fall Semester		Hours
COLL	101 College Orientation	1
COMM	104 Fundamentals of Speech	3
ENGL	101 English Composition I	3
MATH	125 Quantitative Reasoning	3
SOC	101 General Sociology	3
SWK	200 Intro to Social Work	3
TOTAL		16

Spring Semester		Hours
ENGL	102 English Composition II	3
HIST	106 US History I	3
SWK	221 Basic Helping Skills	3
Approved Science Course		3-5
TOTAL		12-14

SECOND YEAR

Fall Semester		Hours
ECON	201 Principles of Economics I	3
PSYC	101 General Psychology	3
SWK	230 Substance Abuse Interventions	3
Approved Humanities Course		3
Approved Science Course		3-5
TOTAL		15-17

Spring Semester		Hours
PLSC	103 Nat'l, State, Local Gov't	3
Approved GE Core Elective		5
Approved Humanities Course		3
Approved Humanities Course		3
TOTAL		14

TOTAL HOURS REQUIRED 61

*Prerequisite required

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- Preferred class for this degree option



ASSOCIATE OF ARTS DEGREE

Social Work

General Education Core			Done	Curr	To do		Done	Curr	To do
Orientation			1 hour				61 hours		
	COLL	101							
Communications			9 hours						
	Written Communications (6 hours)						Oral Communications (3 hours)		
	ENGL	101*				COMM	104*		
	ENGL	102*, 104*							
Humanities			9 hours						
	ART	101, 106				HIST	101*, 102*		
	ASL	101, 102*				MUSC	101		
	ENGL	109*, 222*, 225*				PHIL	101*, 121, 201*, 202*		
	ENGL	230*, 235*, 240*, 245*				SPAN	101, 102*		
	FREN	101				TA	205		
Mathematics			3 hours						
	MATH	125* (Recommended)				MATH	130*, 135		
Science			7 hours						
	Lab						Non-Lab		
	BIOL	101, 110, 120				PHYS	105		
	BIOL	152*							
	CHEM	101, 104, 111*							
	GEOL	115, 210*							
	PHYS	101, 190*							
Social and Behavioral Science			9 hours						
	Civics (6 hours - one from each line)								
	HIST	106*, 107*				ECON	201* (Recommended)		
	PLSC	103*, 104*				ECON	202*		
						GEOG	111		
GE Core Electives			5 hours						
Any additional 5 credit hours from courses listed above.									
Courses cannot be used as Core electives if counted under another section of this Program of Study.									
Major Courses			18 hours						
	PSYC	101 Gen Psyc (3)				SWK	200 Intro to Social Work* (3)		
	PSYC	211 Lifespan Development (3)				SWK	221 Basic Helping Skills (3)		
	SOC	101 Gen Sociology (3)				SWK	230 Substance Abuse Intvtns (3)		
Required Online Course			0 hour						
	CVCS	101 MO Higher Ed Civics Exam							

Spanish AA

Learning a second language encourages diversity, motivates or strengthens concern for world affairs, extends international business/marketing strategies, and enables global travel opportunities. Classes in Spanish may be used to fulfill Humanities requirements in other A.A programs and would be beneficial in almost any career field in the 21st century. A Spanish major may be used in teaching, government, foreign service, translating, and many other careers. A Spanish minor may enrich opportunities for students in business, in the social sciences, in nursing, and in agriculture, for example.

Program of Study

Orientation		1 hour	
COLL	101		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101, 106	HIST	101*#, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101#, 102*
FREN	101	TA	205
Mathematics		3 hours	
MATH	125*#, 130*, 135*		
Science		7 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
	Lab		Non-Lab
BIOL	101, 110, 120	BIOL	102
BIOL	152*	PHYS	102
CHEM	101, 104, 111*	PHYS	105
GEOL	115, 210*		
PHYS	101, 190*		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Civics (3 hours)			
HIST	106*, 107*	ECON	201*, 202*
PLSC	103*	GEOG	111
		PSYC	101, 211*
		SOC	101
GE CORE Electives		5 hours	
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study			
Major Courses		18 hours	
Required Courses (12 hours)			
SPAN	102*	SPAN	201*
SPAN	105*	SPAN	202*
Approved Electives (6 hours)			
SPAN	106*#	SPAN	112*
SPAN	107*	SPAN	207*
SPAN	108*	SPAN	208*
SPAN	109*	SPAN	209*
SPAN	111*#		
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

Suggested Plan of Study

FIRST YEAR

Fall Semester	Hours
COLL 101 College Orientation	1
COMM 104 Fundamentals of Speech	3
ENGL 101 English Composition	3
MATH 125 Quantitative Reasoning	3
SPAN 101 Beginning Spanish I (1st 8 wk)	3
SPAN 102 Beginning Spanish II (2nd 8 wk)	3
TOTAL	16

Spring Semester	Hours
ENGL 102 Advanced English Comp	3
SPAN 201 Intermediate Spanish II (1st 8 wk)	3
SPAN 202 Intermediate Spanish II (2nd 9 wk)	3
Approved Civics Course	3
Approved Soc & Behavioral Science Course	3
TOTAL	15

SECOND YEAR

Fall Semester	Hours
HIST 101 Western Civilization	3
SPAN 105 Conversational Spanish I	3
Approved GE Core Elective	2-3
Approved Science Course	3-5
Approved Spanish Elective	3
TOTAL	14-17

Spring Semester	Hours
Approved GE Core Elective	2-3
Approved Humanities Course	3
Approved Science Elective	3-5
Approved Social and Behavioral Course	3
Approved Spanish Elective	3
TOTAL	14-17

TOTAL HOURS REQUIRED 61-65

*Prerequisite required

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

- Preferred class for this degree option



ASSOCIATE OF ARTS DEGREE

Spanish

General Education Core			Done	Curr	To do		Done	Curr	To do
Orientation			1 hour				61 hours		
	COLL	101							
Communications			9 hours						
	Written Communications (6 hours)						Oral Communications (3 hours)		
	ENGL	101*				COMM	104*		
	ENGL	102*, 104*							
Humanities			9 hours						
	ART	101, 106				HIST	101*, 102*		
	ASL	101, 102*				MUSC	101		
	ENGL	109*, 222*, 225*				PHIL	101*, 121, 201*, 202*		
	ENGL	230*, 235*, 240*, 245*				SPAN	101 (Required for this AA), 102*		
	FREN	101				TA	205		
Mathematics			3 hours						
	MATH	125* (Recommended)				MATH	130*, 135*		
Science			7 hours						
	Lab					Non-Lab			
	BIOL	101, 110, 120				BIOL	102		
	BIOL	152*				PHYS	102		
	CHEM	101, 104, 111*				PHYS	105		
	GEOL	115, 210*							
	PHYS	101, 190*							
Social and Behavioral Science			9 hours						
	Civics (3 hours)								
	HIST	106*				ECON	201*, 202*		
	HIST	107*				GEOG	111		
	PLSC	103*, 104*				PSYC	101, 211*		
						SOC	101		
GE Core Electives			5 hours						
Any additional 5 credit hours from courses listed above.									
Courses cannot be used as Core electives if counted under another section of this Program of Study.									
Major Courses			18 hours						
	Required Courses (12 hours)								
	SPAN	102 Begin Spanish II* (3)				SPAN	201 Intermed Spanish I* (3)		
	SPAN	105 Conv Spanish I* (3)				SPAN	202 Intermed Spanish II* (3)		
	Approved Electives (6 hours)								
	SPAN	106 Conv Spanish II* (3)				SPAN	112 Intro to Spanish Health Care II* (3)		
	SPAN	107 Topics in Spanish				SPAN	207 Topics in Spanish		
	SPAN	108 Topics in Spanish				SPAN	208 Topics in Spanish		
	SPAN	109 Topics in Spanish				SPAN	209 Topics in Spanish		
	SPAN	111 Intro to Span Health Care* (3)							
Required Online Course			0 hour						
	CVCS	101 MO Higher Ed Civics Exam							

CERTIFICATE

Spanish Certificate

Those pursuing this certificate should complete it as a supplement to another career path. Those wishing to pursue a Spanish specific career (translating, interpreting, teaching Spanish, etc.) should pursue the complete Associate of Arts Degree in Spanish. This certificate will provide an opportunity for current students, and those already in the workforce, to demonstrate a level of Spanish proficiency that could appeal to potential employers in any field. Students who successfully complete the program will be prepared to take the globally recognized Oral Proficiency Interview (OPI). While there is no minimum required OPI score for obtaining this certificate, the exam will provide students with documentation providing the official oral proficiency level achieved by the end of this program. Students must earn a minimum of 18 hours for this certificate.

Program of Study

Spanish Major Courses	15 hours
SPAN 101 Beginning Spanish (3)	
SPAN 102* Beginning Spanish II (3)	
SPAN 105* Conversational Spanish I (3)	
SPAN 201* Intermediate Spanish I (3)	
SPAN 202* Intermediate Spanish II (3)	
Electives	3 hours
SPAN 106*, 107*, 108*, 109*, 111*, 112*, 207*, 208*, 209*	

*Prerequisite requirement

Suggested Plan of Study

FIRST YEAR			
Fall Semester			Hours
SPAN 101 Beginning Spanish I			3
	TOTAL		3
Spring Semester			Hours
SPAN 102 Beginning Spanish II			3
	TOTAL		3
SECOND YEAR			
Fall Semester			Hours
SPAN 201 Intermediate Spanish I			3
SPAN 105 Conversational Spanish			3
	TOTAL		6
Spring Semester			Hours
SPAN 202 Intermediate Spanish II			3
SPAN elective			3
	TOTAL		6
Total Hours Required			18



Done Curr To do

Done Curr To do

2021-22

Teaching (AAT)

This is a statewide AAT degree that all community colleges will offer. This degree includes courses that are required for any initial certification. The students will select the electives based on one of several criteria: preparation for the MoGEA/ACT/MOCA, requirement for a specific teaching credential, or a required course at the institution to which they plan to transfer. The courses in the degree will transfer to any institution in the state of Missouri that accepts the AAT degree. Additional requirements for the AAT degree are a minimum GPA of 2.75 and a passing score approved by DESE on each section of the MoGEA or National ACT composite score of 20 (superscore is allowed). Because GPA and test entrance score requirements vary by institution, it is important to work closely with your education advisor at Crowder and the institution to which you plan to transfer. Students must have a cleared background check letter before completing any observation or field experience in schools.

Program of Study

Orientation		1 hour	
COLL	101		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101#, 106	HIST	101*, 102*
ASL	101, 102*	MUSC	101#
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		3 hours	
MATH	125*, 130* or 135*		
Science		7 hours	
Students must meet the seven hour requirement by selecting at least one lab course and one non-lab course			
Lab		Non -Lab	
BIOL	101, 110, 120	PHYS	105
BIOL	152*		
CHEM	101, 104, 111*		
GEOL	115, 210*		
PHYS	101 (Elementary majors)		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
HIST	106*, 107*	ECON	201*, 202*
PLSC	103*	GEOG	111
PSYC	101#	PSYC	211*
Preferred GE CORE Electives		5 hours	
<i>Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study</i>			
Major Courses		18 hours	
Required Courses (12 hours)			
EDUC	125	EDUC	231*
EDUC	240*	EDUC	251*
Approved Electives (6 hours) (Check with advisor)			
ECON	201*, 202*	GEOG	111
EDUC	205	GEOL	210*
EDUC	206	PSYC	204
EDUC	212*	PSYC	211*
Any content specific courses for Middle School or HS certification			
Students must pass the MoGEA with a DESE approved score in each section or have National ACT composite score of 20 or better (superscore is allowed).			
Overall GPA of 2.75 is required			
Required Online Course		0 hour	
CVCS	101 Missouri Higher Ed Civics Examination		

Suggested Plan of Study

FIRST YEAR

Fall Semester	Hours
BIOL 101 General Biology	4
COLL 101 College Orientation	1
EDUC 125 Introduction to Education	3
ENGL 101 English Composition I	3
PSYC 101 General Psychology	3
TOTAL	14

Spring Semester	Hours
COMM 104 Fundamentals of Speech	3
EDUC 240 Education of Exceptional Learners	3
ENGL 102 English Composition II	3
HIST 107 – OR – HIST 106	3
MATH 125 Quantitative Reasoning	3
Approved GE Core Elective	2
TOTAL	17

SECOND YEAR

Fall Semester	Hours
EDUC 231 Educational Psychology	3
PLSC 103 Nat'l, State, Local Gov't	3
Approved GE Core Elective	3
Approved Humanities Course	3
Approved Science Course	3-5
TOTAL	15-17

Spring Semester	Hours
EDUC 251 Teaching Prof w/Field Exp	3
Approved Education Elective	3
Approved Education Elective	3
Approved Humanities Course	3
Approved Humanities Course	3
TOTAL	15

TOTAL HOURS REQUIRED 61-63

*Prerequisite required

- Preferred class for this degree option

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.



ASSOCIATE OF ARTS DEGREE

Teaching (AAT)

General Education Core				Done	Curr	To do		Done	Curr	To do
Orientation		1 hour						61 hours		
	COLL	101								
Communications		9 hours								
	Written Communications (6 hours)						Oral Communications (3 hours)			
	ENGL	101*		_____	_____	_____	COMM	104*	_____	_____
	ENGL	102*, 104*								
Humanities		9 hours								
	DESE Requirement (3 hours)						Additional 6 hours			
	ART	101		_____	_____	_____	ART	106		
	MUSC	101		_____	_____	_____	ASL	101, 102*	_____	_____
							ENGL	109*, 222*, 225*	_____	_____
							ENGL	230*, 235*, 240*, 245*	_____	_____
							FREN	101	_____	_____
							HIST	101*, 102*	_____	_____
							PHIL	101*, 121, 201*, 202*	_____	_____
							SPAN	101, 102*	_____	_____
							TA	205	_____	_____
Mathematics		3 hours								
	MATH	125* (Recommended)		_____	_____	_____	MATH	130*, 135*		
Science		7 hours								
	Lab						Non-Lab			
	BIOL	101, 110, 120		_____	_____	_____	PHYS	105	_____	_____
	BIOL	152*		_____	_____	_____				
	CHEM	101, 104, 111*		_____	_____	_____				
	GEOL	115, 210*		_____	_____	_____				
	PHYS	101# (Elementary majors)		_____	_____	_____				
Social and Behavioral Science		9 hours								
	Choose one from each line									
	HIST	106*, 107*		_____	_____	_____	ECON	201*, 202*	_____	_____
	PLSC	103*, 104*		_____	_____	_____	GEOG	111	_____	_____
	PSYC	101		_____	_____	_____	PSYC	211*	_____	_____
Preferred GE Core Electives		5 hours								
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study.										
Major Courses		18 hours								
	Required Courses (12 hours)						Electives (6 hours) (Check with advisor)			
	EDUC	125 Introduction to Education (3)		_____	_____	_____	ECON	201 Prin of Economics* (3)	_____	_____
	EDUC	231 Educational Psychology* (3)		_____	_____	_____	EDUC	205 Music for Elem Teachers* (3)	_____	_____
	EDUC	240 Education of Exceptional Learners* (3)		_____	_____	_____	EDUC	206 Lit for Children* (3)	_____	_____
	EDUC	251 Teaching Prof w/FE* (3)		_____	_____	_____	EDUC	212* Educational Technology* (3)	_____	_____
				_____	_____	_____	GEOG	111 World Regional Geography (3)	_____	_____
				_____	_____	_____	GEOL	210 Earth & Space Science* (4)	_____	_____
							PSYC	204 Applied Behavior Analysis (3)	_____	_____
							PSYC	211 Lifespan Development* (3)	_____	_____
Students must pass the MOGEA or ACT with a DESE approved score in each section.										
Overall GPA of 2.75 is required										
Required Online Course		0 hour								
	CVCS	101 MO Higher Ed Civics Exam								

Theatre AA

The Theatre Department has three general goals. First, all courses encourage the students to appreciate the theatre as an art form. Second, the courses encourage an understanding of how live theatre develops from script to performance. Third, the courses provide the student with many opportunities to experience live theatre performance and to participate in Crowder College Theatre productions in both performance and technical areas.

Program of Study

Orientation		1 hour	
COLL	101		
Communications		9 hours	
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*		
Oral Communications (3 hours)			
COMM	104*		
Humanities		9 hours	
Students should select classes from two different disciplines (prefixes)			
ART	101, 106	HIST	101*#, 102*
ASL	101, 102*	MUSC	101
ENGL	109*, 222*, 225*	PHIL	101*, 121, 201*, 202*
ENGL	230*, 235*, 240*, 245*	SPAN	101, 102*
FREN	101	TA	205
Mathematics		3 hours	
MATH	125*#, 130*, 135*		
Science		7 hours	
Students must meet the seven hour requirement by selecting two courses from different disciplines (prefixes) and at least one course with a lab			
Lab		Non-Lab	
BIOL	101, 110, 120	BIOL	102
BIOL	152*	PHYS	102
CHEM	101, 104, 111*	PHYS	105
GEOG	115, 210*		
PHYS	101, 190*		
Social and Behavioral Science		9 hours	
Students should select classes from two different disciplines (prefixes)			
Civics (3 hours)			
HIST	106*, 107*	ECON	201*, 202*
PLSC	103*	GEOG	111
		PSYC	101, 211*
		SOC	101
GE CORE Electives		5 hours	
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study			
Major Courses		9 hours	
TA	105	TA	Theatre Practicum
TA	115		
Approved Electives		11 hours	
TA	108	TA	208
TA	112	TA	Theatre Practicum
TA	125, 225	TA	Topics in Theatre
TA	180		
Required Online Course		0 hour	
CVCS	101	Missouri Higher Ed Civics Examination	

- Preferred class for this degree option

Suggested Plan of Study

FIRST YEAR

Fall Semester		Hours
COLL	101 College Orientation	1
COMM	104 Fundamentals of Speech	3
ENGL	101 English Composition I	3
MATH	125 Quantitative Reasoning	3
TA	105 Acting I	3
TA	106/116 Theatre Practicum (Performance or Technical)	1
TA	205 Introduction to Theatre	3
TOTAL		17

Spring Semester		Hours
ENGL	102 English Composition II	3
TA	107/117 Theatre Practicum (Performance or Technical)	1
TA	115 Stagecraft (Spring only)	3
Approved Civics Course		3
Approved Science Course		3-5
TOTAL		13-15

SECOND YEAR

Fall Semester		Hours
TA	206/216 Theatre Practicum (Performance or Technical)	1
Approved GE Core Elective		3
Approved Science Course		3-5
Approved Soc & Behavioral Science Course		3
Approved Theatre Elective		3
TOTAL		13-15

Spring Semester		Hours
Approved GE Core Elective		2
Approved Humanities Course		3
Approved Humanities Course		3
Approved Soc & Behavioral Science Course		3
Approved Theatre Elective(s)		5
TOTAL		16

TOTAL HOURS REQUIRED 61-63

*Prerequisite required

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.



ASSOCIATE OF ARTS DEGREE

Theatre

General Education Core			Done	Curr	To do		Done	Curr	To do
Orientation			1 hour				63 hours		
	COLL	101							
Communications			9 hours						
	Written Communications (6 hours)						Oral Communications (3 hours)		
	ENGL	101*					COMM	104*	
	ENGL	102*, 104*							
Humanities			9 hours						
	ART	101, 106					HIST	101* (Recommended), 102*	
	ASL	101, 102*					MUSC	101	
	ENGL	109*, 222*, 225*					PHIL	101*, 121, 201*, 202*	
	ENGL	230*, 235*, 240*, 245*					SPAN	101, 102*	
	FREN	101					TA	205	
Mathematics			3 hours						
	MATH	125* (Recommended)					MATH	130*, 135*	
Science			7 hours						
	Lab						Non-Lab		
	BIOL	101, 110, 120					BIOL	102	
	BIOL	152*					PHYS	102	
	CHEM	101, 104, 111*					PHYS	105	
	GEOL	115, 210*							
	PHYS	101, 190*							
Social and Behavioral Science			9 hours						
	Civics (3 hours)								
	HIST	106*					ECON	201*, 202*	
	HIST	107*					GEOG	111	
	PLSC	103*, 104*					PSYC	101, 211*	
							SOC	101	
GE Core Electives			5 hours						
Any additional 5 credit hours from courses listed above. Courses cannot be used as Core electives if counted under another section of this Program of Study.									
Major Courses			9 hours				Approved Electives		
	TA	105 Acting I (3)					TA	108 Playwriting (3)	
	TA	115 Stagecraft (3)					TA	112 Directing (3)	
	TA	Theatre Practicum (3)					TA	125, 225 Summer Theatre (3)	
							TA	180 Stage Makeup (3)	
							TA	208 Scene Work (3)	
							TA	Theatre Practicum (1-3)	
							TA	Topics in Theatre (1-4)	
Required Online Course			0 hour						
	CVCS	101 MO Higher Ed Civics Exam							

Veterinary Technology AAS

The Crowder College Veterinary Technology Program is a 78 credit hour program which is fully accredited by the American Veterinary Medical Association (AVMA) and prepares students for careers as veterinary technicians. This is a selective admission program. Applications are accepted until the last Friday in March for the class which begins the following August. An ACT test result must accompany the application. Students must complete a minimum of BIOL 101 or BIOL 110, be eligible to take MATH 100 or higher, be eligible for ENGL 101 or higher, be college-level in reading, and must have worked with or observed a licensed veterinarian in practice for a minimum of 40 clock hours to be eligible for the program. To be licensed as a Registered Veterinary Technician in Missouri, a student must be at least 19 years of age, graduate from an AVMA accredited program, pass the Veterinary Technician National Examination, and pass the Missouri State Veterinary Medical Board Examination. An applicant must be approved by the Missouri State Veterinary Medical Board, or the State Veterinary Medical Board of any other state in which the student wishes to be licensed, before being allowed to sit for these examinations.

Program of Study

Orientation			1 hour		
AGRI	111	OR	COLL	101	
Communications			6 hours		
Written Communications (3 hours)					
ENGL	101*				
Oral Communications (3 hours)					
COMM	104*				
Mathematics			3 hours		
MATH	135*				
Civics			3 hours		
PLSC	103*		HIST	106*, 107*	
Science			13-14 hours		
BIOL	101 (4)	OR	BIOL	110* (5)	
BIOL	220* (5)				
CHEM	104# (4)	OR	CHEM	111* (5)	
General Agriculture			15 hours		
AGEC	223 (3)				
ANSC	114 (4)				
ANSC	180* (2)	OR	VETC	101 Intro to Vet Tech (2)	
ANSC	223* (3)				
ANSC	233 (3)				
Program Core			35 hours		
VETC	110* (2)		VETC	250* (3)	
VETC	120* (3)		VETC	263* (3)	
VETC	130* (3)		VETC	270* (1)	
VETC	140* (3)		VETC	280* (2)	
VETC	180* (4)		VETC	284* (4)	
VETC	220* (3)		VETC	285* (1)	
VETC	230* (2)		VETC	286* (1)	
Required Online Course			0 hour		
CVCS	101 Missouri Higher Ed Civics Examination				

*Prerequisite requirement

- Preferred class for this degree option

Suggested courses for students with a desire to take additional credits not required for the Veterinary Technology AAS degree: Medical Terminology, Artificial Insemination and Reproduction, Feeds and Nutrition, Meat Science, Public Relations in Agri-Business, Business Math, Spanish, or general education courses toward an Associate of Arts degree. Students interested in Biomedical Sciences at the University of Missouri, Columbia must take ENGL 102 and MATH 135.

This Suggested Plan of Study is based on course offerings at the Neosho Campus and online. Adjustments in scheduling may need to be made based on other campus course offerings. This is just one possible plan. The length of time to complete the program may vary for each student. In addition, based on placement results, individuals may need to take additional courses for academic remediation.

Suggested Plan of Study

FIRST YEAR

Fall Semester		Hours
AGRI	111 – OR – COLL 101	1
ANSC	114 Animal Science	4
BIOL	101 General Biology	4
MATH	135 Algebra for Calculus	3
TOTAL		12

Spring Semester		Hours
AGEC	223 Ag Computer Applications	3
ANSC	180 Intro to Veterinary Science	2
CHEM	104 OR CHEM 111	4-5
ENGL	101 English Composition I	3
TOTAL		12-13

APPLY FOR THE VETERINARY TECHNOLOGY PROGRAM IN APRIL OF THIS SPRING SEMESTER

SECOND YEAR

Fall Semester		Hours
COMM	104 Fundamentals of Speech	3
VETC	110 Sanitation and Animal Care	2
VETC	140 Companion Animal Technology	3
VETC	180 Vet Anatomy and Physiology	4
TOTAL		12

Spring Semester		Hours
ANSC	233 Horse Science	3
VETC	120 Veterinary Hospital Technology I	3
VETC	130 Clinical Pathology I	3
VETC	285 Vet Tech Clinical Experience I	1
	Approved Civics Course	3
TOTAL		13

Summer Semester		Hours
VETC	284 Vet Tech Internship	4
TOTAL		4

THIRD YEAR

Fall Semester		Hours
ANSC	223 Farm Animal Health	3
BIOL	220 General Microbiology	5
VETC	220 Vet Hospital Technology II	3
VETC	280 Radiology and Elect Procedures	2
TOTAL		13

Spring Semester		Hours
VETC	230 Lab Animal/Avian Technology	2
VETC	250 Clinical Pathology II	3
VETC	263 Large Animal Med/Surg	3
VETC	270 Board Review	1
VETC	286 Vet Tech Clinical Experience II	1
TOTAL		10

TOTAL HOURS REQUIRED 76-77



ASSOCIATE OF APPLIED SCIENCE DEGREE

Veterinary Technology

			Done	Curr	To do		Done	Curr	To do
Orientation		1 hour				76-77 hours			
	AGRI	111				OR COLL 101			
Communications		6 hours							
		Written Communications (3 hours)							
	ENGL	101*							
		Oral Communications (3 hours)							
	COMM	104*							
Mathematics		3 hours							
	MATH	135*							
Civics		3 hours							
	HIST	106*				PLSC	103*, 104*		
	HIST	107*							
Science		13-14 hours							
	BIOL	101				CHEM	104 (Recommended)		
	OR	BIOL 110*				OR	CHEM 101, 111*		
	BIOL	220*							
General Agriculture		15 hours							
	AGEC	223 Ag Comp Apps (3)							
	ANSC	114 Animal Sci (4)							
	ANSC	180 Intro to Vet Science* (2)							
	ANSC	223 Farm Animal Health* (3)							
	ANSC	233 Horse Science (3)							
Program Core		35 hours							
	VETC	110 Sanitat & Animal Care* (2)				VETC	250 Clinical Path II* (3)		
	VETC	120 Vet Hospital Tech I* (3)				VETC	263 Large Animal Med/Surg* (3)		
	VETC	130 Clinical Path I* (3)				VETC	270 Board Review* (1)		
	VETC	140 Companion Animal Tech* (3)				VETC	280 Radiology & Elect Procs* (2)		
	VETC	180 Vet Anatomy and Phys* (4)				VETC	284 Vet Tech Internship* (4)		
	VETC	220 Vet Hospital Tech II* (3)				VETC	285 Vet Tech Clinical Exp I* (1)		
	VETC	230 Lab Animal/Avian Tech* (2)				VETC	286 Vet Tech Clinical Exp II* (1)		
Required Online Course		0 hour							
	CVCS	101 Missouri Higher Ed Civics Exam							

Welding: Welding Certificate (Plate)

Welding: Welding Certificate (Pipe & Plate)

Welding: Welding Certificate (Plate & Fabrication)

Welding AAS

This program prepares students for a variety of welding career opportunities. The program is built around a set of core classes designed to give students the basic skill set required for the workforce, the construction industry, the oil & gas industry and many other career options. Students also are prepared for employment in companies with automated manufacturing processes.

The multiple Certificates prepare students for employment as entry level welders using Electric Arc and Pipe & Plate (& Fabrication) welding technology. Students will be introduced to Oxy-fuel cutting (OFC), Flux Core welding, and Carbon Arc Air Cutting. The program will instruct the students in advanced welding applications for pipe welding, which will include the Electrical Arc Welding Technology. This program will also provide the student with a technical understanding of tacking and welding techniques for completing projects to reflect industry standards. Additionally, the Pipe & Plate & Fabrication Certificate students will learn a technical understanding of advanced cutting operations including Numerical Control (NC) programming, and robotic controls.

Program of Study

Plate Certificate Courses			16 hours
WELD	117	Blue Print Reading (2)	
WELD	160	Plate Methods I (7)	
WELD	165*	Plate Methods II (7)	
Pipe & Plate Certificate Courses			16 hours
WELD	270*	Pipe Methods I (8)	
WELD	275*	Pipe Methods II (8)	
Pipe & Plate & Fab Certificate Courses			15 hours
DRFT	101	Intro to Eng Drwg and Print Reading (3)	
WELD	136	Metallurgy Concepts (2)	
WELD	280*	Fabrication Methods I (5)	
WELD	285*	Fabrication Methods II (5)	
Orientation			2 hours
COLL	105	Technical Career Development I (1)	
COLL	106	Technical Career Development II (1)	
Communications			9 hours
Written Communications (6 hours)			
ENGL	101*	English Composition (3)	
ENGL	102*	Advanced English Comp (3)	
ENGL	203*	Technical Report Writing (3)	
Oral Communications (3 hours)			
COMM	104*	Fundamentals of Speech (3)	
Mathematics			3 hours
MATH	104*	Technical Mathematics (3)	
MATH	125*	Quantitative Reasoning (3)	
MATH	135*	Algebra for Calculus (3)	
Civics			3 hours
HIST	106*, 107*		
PLSC	103*		
Required Courses			3 hours
AMT	182	Introduction to Automated Robotics (3)	
Required Online Course			0 hour
CVCS	100	Missouri Higher Ed Civics Examination	

Suggested Plan of Study

Fall Semester		Hours
DRFT	101 Intro to Engineering Drawing (PPF)	3
WELD	117 Blue Print Reading	2
WELD	160 Plate Methods I	7
WELD	165 Plate Methods II	7
TOTAL		19

Graduate with Welding Plate Certificate

Spring Semester		Hours
COLL	105 Technical Career Dev. I	1
COLL	106 Technical Career Dev. II	1
WELD	270 Pipe Methods I	8
WELD	275 Pipe Methods II	8
TOTAL		18

Graduate with Welding Plate & Pipe Certificate

SECOND YEAR

Fall Semester		Hours
WELD	136 Metallurgy Concepts	5
WELD	280 Fabrication Methods I	5
WELD	285 Fabrication Methods II	2
Approved Civics Course		3
Approved Written Communications Course		3
TOTAL		18

Graduate with Welding Plate, & Fab Certificate

Spring Semester		Hours
AMT	182 Intro to Automated Robotics	3
COMM	104 Fundamentals of Speech	3
Approved Mathematics Course		3
Approved Written Communications Course		3
TOTAL		12

Graduate with Welding AAS

Total Plate Certificate Hours Required	16
Additional Hours Needed for P&P Cert	18
Additional Hours Needed for P&F Cert	15
Additional Hours Needed for AAS	18
Total AAS Hours Required	67

*Prerequisite requirement

- Preferred class for this degree option

Courses for Certificate	
Additional Courses for AAS Degree	



CERTIFICATE Welding Certificate (Plate)

			Done	Curr	To do				
Major courses			16 hours						
	WELD	117 Blue Print Reading (2)							
	WELD	160 Plate Methods I (7)							
	WELD	165* Plate Methods II (7)							



CERTIFICATE Welding Certificate (Pipe & Plate)

			Done	Curr	To do				
Orientation			2 hours			34 hours			
	COLL	105 Technical Career Development I (1)							
	COLL	106 Technical Career Development II (1)							
Major courses			32 hours						
	WELD	117 Blue Print Reading (2)							
	WELD	160 Plate Methods I (7)							
	WELD	165* Plate Methods II (7)							
	WELD	270* Pipe Methods I (8)							
	WELD	275* Pipe Methods II (8)							



CERTIFICATE Welding Certificate (Plate & Fabrication)

			Done	Curr	To do				
Orientation			2 hours			33 hours			
	COLL	105 Technical Career Development I (1)							
	COLL	106 Technical Career Development II (1)							
Major courses			31 hours						
	DRFT	101 Intro to Eng Drw g and Print Reading (3)							
	WELD	117 Blue Print Reading (2)							
	WELD	136 Metallurgy Concepts (2)							
	WELD	160 Plate Methods I (7)							
	WELD	165* Plate Methods II (7)							
	WELD	280* Fabrication Methods I (5)							
	WELD	285* Fabrication Methods II (5)							



ASSOCIATE OF APPLIED SCIENCE DEGREE

Welding AAS

			Done	Curr	To do				Done	Curr	To do
Orientation			2 hours			67 hours					
	COLL	105 Technical Career Dev I (1)									
	COLL	106 Technical Career Dev II (1)									
Communications			9 hours								
	Written Communications (6 hours)						Oral Communications (3 hours)				
	ENGL	101*					COMM	104*			
	ENGL	102*, 104*									
	ENGL	203*									
Mathematics			3 hours								
	MATH	135*					MATH	104*, MATH 125*			
Civics			3 hours								
	HIST	106*					PLSC	103*			
	HIST	107*									
Required Courses			50 hours								
	AMT	182 Intro to Automated Robotics (3)					WELD	285* Fabrication Methods II (5)			
	DRFT	101 Intro to Eng, Drawing & PR (3)									
	WELD	117 Welding Blue Print Reading* (2)									
	WELD	136 Metallurgy Concepts (2)									
	WELD	160 Plate Methods I (7)									
	WELD	165* Plate Methods II (7)									
	WELD	270* Pipe Methods I (8)									
	WELD	275* Pipe Methods II (8)									
	WELD	280* Fabrication Methods I (5)									
*Prerequisite course(s) or minimum test scores required. See catalog course descriptions for details.											
Required Online Course			0 hour								
	CVCS	101 Missouri Higher Ed Civics Exam									

Workplace Skills Certificate

This certificate addresses the workforce and soft skills needs of students completing a broad range of career and technical plans-of-study. Area employers identify these skills as important when hiring and retaining employees.

Program of Study

Suggested Plan of Study

Certificate Courses		13 hours
BSAD	115 Computer Concepts (3) - OR - Approved Computer-Based Course	
BSAD	121 Business Mathematics (3) - OR - MATH 104 Technical Mathematics (3) - OR - Approved Math Course	
COLL	104 Practical Communication (3) - OR Approved COMM course	
COLL	105 Technical Career Development I (1) - OR - BSAD 103 Professional Development (2)	
COLL	106 Technical Career Development II* (1) - OR - BSAD 103 Professional Development (2)	
COLL	205 Career and Life Development* (2)	
Approved Electives		3 hours
BSAD	108 Personal Finance (3)	
BSAD	110 Leadership Development and Service (1)	
BSAD	125 Computer Applications (3)	
BMGT	115 Customer Service (3)	
CJ	280 Report Writing (3)	
ENGL	203 Technical Report Writing* (3)	
LOC	100 College Success (3)	
LOC	105 Career Directions (1)	
LOC	206 Career Exploration (1)	
SPAN	111 Intro to Spanish for Health Care Workers (3)	
Any CTEC courses		

FIRST YEAR			
Fall Semester			Hours
COLL	104	Practical Communication	3
COLL	105	Technical Career Development I	1
COLL	106	Technical Career Development II	1
COLL	205	Career and Life Development	2
BSAD	115	Computer Concepts	3
BSAD	121	Business Mathematics	3
Approved Electives			3
TOTAL			16
Total Hours Required			16

*Prerequisite requirement



CERTIFICATE **Workplace Skills**

16 hours						Done	Curr	To do
Major Courses		13 Hours						
BSAD	115 Computer Concepts (3) -OR- Approved Computer-Based Course					_____	_____	_____
BSAD	121 Business Mathematics (3) -OR- MATH 104 Technical Mathematics (3) -OR- Approved Math Course					_____	_____	_____
COLL	104 Practical Communication (3) -OR- Approved ENGL course & Approved COMM course					_____	_____	_____
COLL	105 Technical Career Development I (1) -OR- BSAD 103 Professional Development (2)					_____	_____	_____
COLL	106 Technical Career Development II* (1) -OR- BSAD 103 Professional Development (2)					_____	_____	_____
COLL	205 Career and Life Development* (2)					_____	_____	_____
Approved Electives		3 Hours						
BSAD	108 Personal Finance (3)					_____	_____	_____
BSAD	110 Leadership Development and Service (1)					_____	_____	_____
BSAD	125 Computer Applications (3)					_____	_____	_____
BMGT	115 Customer Service (3)					_____	_____	_____
CJ	280 Report Writing (3)					_____	_____	_____
ENGL	203 Technical Report Writing* (3)					_____	_____	_____
LOC	100 College Success (3)					_____	_____	_____
LOC	105 Career Directions (1)					_____	_____	_____
LOC	206 Career Exploration (1)					_____	_____	_____
SPAN	111 Intro to Spanish for Health Care Workers (3)					_____	_____	_____
Any CTEC Courses								

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Diesel Technology Engines I & II Certificates DTN1 & DTN2	116
Drafting: Computer Aided Drafting (CAD) Technician Certificate CADC	119
Fire Science Certificate FS2	121
General Studies AA GS	123
History AA H	125
HVAC Certificates/AAS HVACI, HVACT & HVAC	127
Information Technology AA ITC	129
Mathematics AA MATH	131
Nursing (Practical) Certificate LPCT	133
Nursing (Registered) AS N	135
Occupational Therapy Assistant AS OTA	137
Paramedic Certificate P	141
Paramedical Science AAS PS	141
Patient Care Technician Certificate PCT	143
Pharmacy Technician Certificate PT	145
Photography AA PHO	147
Physical Education AA EPH	149
Physics AA PSP	151
Pre-Engineering AS PE	153
Pre-Medicine AA PM	155
Preschool Teacher/Paraprofessional AA PTP	157
Pre-Veterinary Medicine AA PVM	159
Psychology: Autism Option AA PAO	89
Psychology: General AA PSY	161

Social Work AA SWK	163
Spanish AA SP	165
Spanish Certificate SPCT	167
Teaching (AAT) TE	169
Theatre AA T	171
Veterinary Technology AAS VETC	173
Welding AAS AMTW	175
Welding: Welding Certificate (Plate & Fabrication) AMTPF	175
Welding: Welding Certificate (Pipe & Plate) AMTWC	175
Welding: Welding Certificate (Plate) AMTWP	175
Workplace Skills Certificate WSCT	178

Missouri Higher Education Transfer Core Curriculum at Crowder College

Social and Behavioral Sciences (9 Credit Hours Total)

Students must meet the nine credit hour requirement by selecting courses from two different disciplines (prefixes), including at least one Civics course

Other SBS Courses, 6 Credit Hours Required		Civics, 3 Credit Hours Required	
Principles of Macro Economics I, ECON 201 (MOTR ECON 101)	3	U.S. History I, HIST 106 (MOTR HIST 101)	3
Principles of Micro Economics II, ECON 202 (MOTR ECON 102)	3	U.S. History II, HIST 107 (MOTR HIST 102)	3
World Regional Geography GEOG 111 (MOTR GEOG 101)	3	National, State, Local Government, PLSC 103 (MOTR POSC 101)	3
General Psychology, PSYC 101 (MOTR PSYC 100)	3	Introduction to the Criminal Justice System, CJ 101 (MOTR CRJS 101)	3
Life Span Development, PSYC 211 (MOTR PSYC 200)	3	General Sociology, SOC 101 (MOTR SOCI 101)	3
Principles of Agriculture Economics, AGECE 123 (MOTR ECON 102) {For Agriculture Majors Only}	3		

Written Communications and Oral Communications (9 Credit Hours Total)

Written Communication, 6 Credit Hours Required		Oral Communication, 3 Credit Hours Required	
English Composition, ENGL 101 (MOTR ENG 100)	3	Fundamentals of Speech, COMM 104 (MOTR COMM 110)	3
Advanced English Composition, ENGL 102 (MOTR ENG 200)	3	Technical Report Writing, ENGL 203 (MOTR ENGL 110)	3

Natural Sciences (7 Credit Hours Total)

Students must meet the seven credit hour requirement by selecting courses from two different disciplines (prefixes), including at least one Lab course

Lab		Non-Lab	
General Biology, BIOL 101 (MOTR BIOL 100L)	4	Descriptive Astronomy, PHYS 105 (MOTR ASTR 100)	3
General Zoology, BIOL 110 (MOTR BIOL 150L)	4	Biology Concepts, BIOL 102 (MOTR BIOL 100)	3
General Botany, BIOL 120 (MOTR BIOL 150L)	4	Physical Science Essentials, PHYS 102 (MOTR PHYS 110)	3
Human A & P I, BIOL 152 (MOTR LIFS 150LAP)	5		
Survey of Chemistry, CHEM 101 (MOTR CHEM 100L)	5		
Chemistry for Health Sciences, CHEM 104 (MOTR CHEM 100L)	4		
General Chemistry I, CHEM 111 (MOTR CHEM 150L)	5		
Introduction to Geology, GEOL 115 (MOTR GEOL 100L)	4		
Earth and Space Science for Teachers, GEOL 210 (MOTR PHYS 110L)	4		
Survey of Physical Science, PHYS 101 (MOTR PHYS 110L)	4		
General Physics I, PHYS 190 (MOTR PHYS 200L)	4		

Mathematical Sciences (3 Credit Hours Total)

Algebra for Calculus, MATH 135 (MOTR MATH 130)	3
Quantitative Reasoning, MATH 125 (MOTR MATH 120)	3
Elementary Statistics, MATH 130 (MOTR MATH 110)	3

Humanities and Fine Arts (9 Credit Hours Total)

Students must meet the nine credit hour requirement by selecting courses from two different disciplines (prefixes)

Art Appreciation, ART 101 (MOTR ARTS 100)	3	Western Civilization I, HIST 101 (MOTR WCIV 101)	3
Ceramics, ART 110 (MOTR PERF 105C)	3	Western Civilization II, HIST 102 (MOTR WCIV 102)	3
Drawing I, ART 106 (MOTR PERF 105D)	3	Music Appreciation, MUSC 101 (MOTR MUSC 100)	3
Beginning American Sign Language I, ASL 101 (MOTR LAN 105)	3	World Religions, PHIL 121 (MOTR RELG 100)	3
Beginning American Sign Language II, ASL 102 (MOTR LAN 106)	3	Beginning Spanish I, SPAN 101 (MOTR LANG 103)	3
Introduction to Literature ENGL 109 (MOTR LITR 100)	3	Beginning Spanish II, SPAN 102 (MOTR LANG 104)	3
World Literature I, ENGL 222 (MOTR LITR 200)	3	Introduction to Theatre, TA 205 (MOTR THEA 100A)	3
World Literature II, ENGL 225 (MOTR LITR 200)	3	Painting I, ART 107 (MOTR PERF 105P)	3
American Literature I, ENGL 230 (MOTR LITR 101)	3	Sculpture I, ART 111 (MOTR PERF 105S)	3
American Literature II, ENGL 235 (MOTR LITR 101)	3	Chorale, MUSC 106, 107, 206, 207 (MOTR MUSC 102C)	1
British Literature I, ENGL 240 (MOTR LITR 102)	3	Community Mixed Chorus, MUSC 195, 196, 295, 296 (MOTR MUSC 102C)	1
British Literature II, ENGL 245 (MOTR LITR 102)	3	Acting I, TA 105 (MOTR PERF 100)	3
French I, FREN 101 (MOTR LANG 101)	3	Playwriting, TA 108 (MOTR PERF 103P)	3
Introduction to Western Philosophy, PHIL 101 (MOTR PHIL 100)	3	Directing, TA 112 (MOTR PERF 101)	3
Logic, PHIL 201 (MOTR PHIL 101)	3	Stagecraft, TA 115 (MOTR PERF 104S)	3
Ethics, PHIL 202 (MOTR PHIL 102)	3	Stage Makeup, TA 180 (MOTR PERF 104M)	3

CORE Electives (5 Credit Hours Total)

Any additional 5 credit hours from courses listed above.

Courses cannot be used as Core Electives if counted under another section.

Latest Revision: 02/26/2021