CROWDER COLLEGE

Course Catalog
2017-2018

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

Version 1.09

Neosho (Main Campus)
601 Laclede, Neosho MO 64850
Admissions 1-866-238-7788 (toll-free)
(417) 451-3223, Main Campus Switchboard
(417) 455-5702 Main Campus Fax

Cassville Instruction Center
4020 North Main St., Cassville MO 65625
Phone: (417) 847-1706 Fax: (417) 847-1367

McDonald County Instruction Center
194 College Road, Jane 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 centers:

Monett
Scott Regional Technology Center
Two David Sippy Dr. Monett, MO 65708
(417) 236-2895

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

Crowder College | 2017-2018 CALENDAR

FALL 2017 Semester

AUGUST 2017

S	M	T	W	Th	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

21 **Classes begin** – 16 wk & 1st 8 wk
22 Enrollment Ends – 1st 8 wk
25 Enrollment Ends – 16 wk
30 100% Tuition & Fee Refund ends – 1st 8 wk

SEPTEMBER 2017

S	M	T	W	Th	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

4 **Labor Day – College closed**
5 50% Tuition & Fee Refund ends – 1st 8 wk
11 100% Tuition & Fee Refund ends – 16 wk
11 100% Book Buyback ends – 16wk
19 50% Tuition & Fee Refund ends – 16 wk
28 Last day to withdraw – 1st 8 wk
30 - Oct 6 Course Evals open – 1st 8 wk

OCTOBER 2017

S	M	T	W	Th	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

12 Finals – 1st 8 wk
13 Fall Break – College closed
16 Classes begin – 2nd 8 wk
17 Enrollment Ends – 2nd 8 wk
25 100% Tuition & Fee Refund ends – 2nd 8 wk
25 100% Book Buyback ends – 2nd 8
30 50% Tuition & Fee Refund ends – 2nd 8 wk

NOVEMBER 2017

S	M	T	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

1 Financial Aid Priority Deadline
8 Last day to withdraw – 16 wk
11 - 17 Course Evals open – 16 & 2nd 8
13 Priority Enrollment – Sophomores 28 hours plus
16 Priority Enrollment – Freshmen 1-27 hours
22 **- 24 Thanksgiving Break – College closed**
27 Open Enrollment
27 Last day to withdraw – 2nd 8 wk

DECEMBER 2017

S	M	T	W	Th	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

11 **- 14 FINALS** – 16 wk & 2nd 8 wk
16 Graduation
22 **- Jan 1 Winter Break – College closed**

SPRING 2018 Semester

JANUARY 2018

S	M	T	W	Th	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

1 **New Year's Day–** College closed
15 **ML King Day** – College Closed
16 **Classes begin** – 1st 8 & 16 wk
17 Enrollment ends – 1st 8 wk
19 Enrollment ends – 16 wk
25 100% Tuition & fees refund – 1st 8
30 50% Tuition & fees refund – 1st 8

FEBRUARY 2018

S	M	T	W	Th	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			

5 100% Tuition & fees refund -16 wk
5 100% Book buy-back ends – 16 & 1st 8 wk
13 50% Tuition & fees refund – 16 wk
19 **Presidents' Day** (*Twilight & Evening classes meet*)
23 Last day to withdraw – 1st 8
24 **- Mar 2** Course evals – 1st 8

MARCH 2018

S	M	T	W	Th	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

9 **Finals** - 1st 8 wk
12 **- 18 Spring Break – No Classes**
16 **College Closed**
19 **Classes begin** - 2nd 8 wk
20 Enrollment ends – 2nd 8 wk
28 100% Tuition & fees refund ends – 2nd 8 wk
28 100% Book buy-back ends – 2nd 8 wk
30 **Good Friday – College closed**

APRIL 2018

S	M	T	W	Th	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

1 Financial Aid Priority Deadline for
2 50% Tuition & Fee Refund ends – 2nd 8 wk
12 **College closes at 3:00pm** *(twilight & evening classes meet)*
16 Last day to withdraw – 16 wk
16 Priority Enrollment – Soph 28+ hrs
19 Priority Enrollment – Fresh 1-27 hrs
21 **- 27** Course evals open – 16 wk & 2nd 8 wk
27 Last day to withdraw – 2nd 8 wk
30 Open enrollment

MAY 2018

S	M	T	W	Th	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

14 - 17 **FINALS** – 16 & 2nd 8 wk
19 Graduation
28 **Memorial Day** – College Closed

SUMMER 2018 Semester

JUNE 2018

S	M	T	W	Th	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

4 **Classes begin** – 1st 4 & 8 wk
4 Enrollment ends – 1st 4 wk
5 Enrollment ends – 8 wk
7 100% Tuition & Fees Refund – 1st 4
11 50% Tuition & Fees Refund – 1st 4
13 100% Tuition & Fees Refund – 8 wk
13 100% Book buyback ends – 8 wk & 1st 4
16 **- 22** Course evals open – 1st 4
18 50% Tuition & Fees Refund – 8 wk
22 Last day to withdraw – 1st 4 wk
29 **FINALS** – 1st 4 wk

JULY 2018

S	M	T	W	Th	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

1 Financial Aid Priority Deadline
2 **Classes begin** – 2nd 4 wk
2 Enrollment ends – 2nd 4 wk
3 **College closes at 3pm** (twilight & evening classes meet)
4 **Independence Day** – College Closed
6 Make up classes for holiday
6 100% Tuition & Fees Refund – 2nd 4
6 100% Book buyback ends – 2nd 4
10 50% Tuition & fees refund – 2nd 4
13 Last day to withdraw – 8 wk
14 **- 20** Course evals open – 2nd 4 & 8 wk
27 **FINALS** – 8 wk & 2nd 4 wk

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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.

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.

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 May 2016

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

Nursing – National League for Nursing Accreditation Commission; Missouri State Board of Nursing, Expires 2018

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

Paramedic – Committee on Accreditation of Educational Programs for Emergency Medical Services Professions (CoAEMSP), Expires September 2017; State of Missouri, Bureau of EMS Division (BEMS)

Veterinary Technology – American Veterinary Medical Association (AVMA), Expires 2016

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

Student Abilities

Nine student "abilities" 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. There is a matrix that has been developed to show which courses address the student abilities. The definitions for these abilities are as follows:

- COMMUNICATION

Communication is the process by which a thought or impression is effectively moved through its unique mode from one person or source to another.

- CULTURAL AWARENESS

Cultural Awareness is the recognition of, and the appreciation for, the history, customs, lore, skills, arts, observances and beliefs of a people and how these components meet basic human needs in response to a changing environment.

- ENVIRONMENTAL AWARENESS

Environmental Awareness is an understanding of the external conditions that influence growth and development and how human choices influence the relationship between living beings, their surroundings and their quality of life.

- ETHICAL DECISION MAKING

Ethical Decision Making is the selection of courses of action in accordance with principles or standards of right or good conduct.

- MANAGING INFORMATION

Managing information is the ability to access, utilize, implement, and store information from electronic and other sources in order to make informed decisions, present information, and solve problems.

- PHYSICAL AND EMOTIONAL HEALTH

Health is a condition of physical and emotional well-being of the individual, which is achieved through competent self-care and satisfying relationships with others.

- PROBLEM SOLVING

Problem Solving is the process of identifying an obstacle or dilemma, using critical thinking strategies and decision making skills, and applying appropriate measures needed to overcome or resolve the obstacle or dilemma.

- RESPONSIBLE CITIZENSHIP

Citizenship refers to the relationship between an individual and the community to which he or she belongs. Responsible citizenship involves the recognition of the inseparable rights and duties associated with membership in this community. It also requires accountability and meaningful participation in public decision making and obligations of life in this community.

- SELF-ASSESSMENT

Self-assessment is a process of determining one's level of

functioning, both strengths and weaknesses. It precedes the final decision-making stage of evaluation, focusing upon a number of variables judged to be important, and using a number of techniques to provide authentic and meaningful feedback for improvement.

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. Although US citizenship or other legally-present status is not a general admission requirement, students should be advised that some college degree or special admission programs may require US citizenship or a legally-present status in order to sit for a board certification or licensure exam. Students are strongly encouraged to investigate the citizenship requirements for the college degree or special admission programs board certification or licensure exams with those certifying bodies before college admission or application to a special admission program.

College Orientation (COLL 101)

COLL101 is a one credit, required course for all degree or certificate seeking students during their first enrolled semester. Transfer and returning Crowder College students (first enrolled prior to fall 2005) that have successfully completed college orientation elsewhere or have a cumulative grade point average of 2.0 on a minimum of 12 credits are exempt from this course.

Students that are non-degree seeking are not required to take COLL101. However, if students become degree or certificate seeking, they will be required to successfully complete the course.

Students that were enrolled before Fall 2005 (when the course was officially in the catalog) are not required to take the course and are grandfathered in. However, students must be consecutively enrolled prior to Fall 2005 to be considered under the grandfather clause.

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:

a) 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.
b) 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, <u>and</u> provide a signed letter of recommendation from their principal or guidance counselor.
c) 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.

d) 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 Missouri Department of Higher Education).

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

Nursing

The Crowder College 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 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 certification or EMT licensure
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's must have completed Anatomy and Physiology I, II, and Microbiology to be eligible for admission
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 or 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 in April 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 20 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:

Class	Credit for
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
Engl Lang & Comp	ENGL 101
Engl 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.

Global English Fast-Track

C3 – Culture, Communication, Confidence

Persons applying for admission to Crowder College who have completed all or part of their high school education outside of the United States must demonstrate English language proficiency. Students without college level ACT scores have two paths from which to choose:

1. Students may choose to take the reading and writing sections of the placement test. If a student's placement scores are below college level, he/she is required to enroll in the Global English Fast-Track (GEFT) for further language development. The Woodcock Munoz assessment is given to determine the student's placement within GEFT.
2. Students may choose to directly enroll into GEFT. The Woodcock Munoz assessment is given to determine the student's placement within the GEFT program.

High school graduates whose first language is not English but who attended all four years in the United States may request further language assessment for possible placement in the GEFT prior to placement testing. Also, students who believe their placement scores are not an accurate reflection of their language ability may request additional testing with the Woodcock Munoz for possible placement in GEFT. Crowder College faculty and staff may also recommend to a student that additional Woodcock Munoz testing be conducted.

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.

Lifetime Learner Students

Students who graduated from Crowder College before 2000 with a degree or certificate 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, facility use fees, online course fees, lab 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 transcripted if the student is not enrolled. No financial aid is available for this credit.

Online Course

A course offered through the Internet. Students must meet requirements for college level English and reading (see Assessment and Placement) to take online classes. Keyboarding and word processing experience are necessary, as well as access to a properly equipped computer with Internet access.

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 permanent home is in a foreign country at the time of registration. Students are not eligible to change their residency status while they remain international students.

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) or state (Missouri Resident).

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 transcripted 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 in the school within three years of discharge from 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.

• 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 in the school prior to the expiration of the three year period following discharge or release as described above and must be using educational benefits under either chapter 30 or chapter 33, of title 38, United States Code.

• Anyone using benefits under the Marine Gunnery Sergeant John David Fry Scholarship (38 U.S.C. § 3311(b)(9)) who lives in Missouri while attending a school located in Missouri (regardless of his/her formal State of residence).

• Anyone using transferred Post-9/11 G.I. Bill benefits (38 U.S.C. § 3319) who lives in Missouri while attending a school located in Missouri (regardless of his/her formal state of residence) and the transferor is a member of the uniformed service who is serving on active duty.

• The policy shall be read to be amended as necessary to be compliant with the requirements of 38 U.S.C. 3679(c) as amended.

STUDENT PROGRESS AND POLICIES

Student Progress Policies

Credits earned toward diplomas, certificates and transfer are determined by the amount of class or laboratory time specified for each course. Full-time students carry a minimum of 12 semester hours (credits).

Students with superior scholastic marks and advisor recommendation may register for more than 16 hours based on the following formula:

2.50 Cumulative Grade Point Average - 17 hours

2.75 Cumulative Grade Point Average - 18 hours
3.25 Cumulative Grade Point Average - 19 hours

Exceptions to the above guidelines must be approved by the Vice President of Academic Affairs or the Vice President of Student Affairs.

Additional guidelines to be considered before registration:

1. Students should expect to study or work outside of class approximately two hours for each hour in class.
2. Regular class attendance and participation are strongly recommended. Excessive absences are detrimental to student progress and success.

Typically, Crowder College students may not earn more than a total of fifteen (15) credit hours through one or more of the following alternative learning experiences: Experiential Credit, Self-Directed Learning and Testing Out (Credit by Examination). Under unusual circumstances, application for exceptions can be approved and should be initiated by completing an Alternative Learning Form, which is available in the Office of Academic Affairs.

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 Probation

Students on academic warning with a term GPA below 2.0 will be placed on academic probation regardless of the cumulative GPA. This applies also to students transferring in with a GPA below a 2.0. After being placed on academic probation, the student must maintain a 2.0 GPA each term to avoid being placed on academic suspension. Students on academic probation must enroll in College Connections (LOC 103) in the subsequent term. Students who are placed on academic probation and maintain a 2.0 term GPA, will be placed on probation-continued until their cumulative GPA is a 2.0 or above.

Academic Suspension

Students with a cumulative GPA and term GPA below 2.0 after a semester of probation will be placed on academic suspension for one semester. Students may appeal the suspension. (See Student Handbook for additional details.)

If the student was previously on suspension one time and is placed on suspension a second time, the student will be not be allowed to enroll for one year. The student must then petition for admission. If the student was previously on suspension twice and is placed on 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.

Academic Warning

Students with a term GPA below a 2.0 having a cumulative GPA higher than a 2.0 will be initially placed on academic warning.

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.

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 better semester grade point average are placed on the Dean's List. Full-time students with a 3.5 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:

Work Quality	Grade	Grade Points
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:

ENGL 101 (B)
3 hrs x 3 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.

Satisfactory Progress

Satisfactory progress toward graduation is required for a student to remain in school.
Minimum progress standards:
1-15 sem. credits attempted = 1.50 cumulative GPA
16-30 sem. credits attempted = 1.75 cumulative GPA
31-45 sem. credits attempted = 1.90 cumulative GPA
46-60 sem. credits attempted = 2.00 cumulative GPA

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 July or December will be invited to participate in the Fall graduation

ceremony. Students completing their course work in May 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.

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

The ODS 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 (SSS)

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.

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 whose academic progress falls below minimum academic requirements will be placed on academic probation. After being placed on academic probation, the student must maintain a 2.0 GPA each semester to avoid being placed on academic suspension. Students on academic probation must enroll in College Connections (LOC 103) in the subsequent term.

Academic Suspension – Students with a cumulative GPA below 2.0 after a semester of probation will be placed on academic suspension. The student will be required to halt their academic pursuit for one semester and then must petition the suspension committee to be considered for re-admittance.

Students with a probation status who do not achieve a 2.0 term GPA will be placed on suspension.

Academic Warning – Students with a cumulative GPA below a 2.0 but higher than the minimum academic progress standards will be placed on academic warning.

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.

Description of Courses

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MEDICAL ADMINISTRATIVE ASSISTANT 52
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PSYCHOLOGY 58
SOCIAL WORK 58
SOCIOLOGY 59
SPEECH 59
THEATRE 59
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WELDING 60

Course descriptions are listed on the following pages under headings, which indicate areas of instruction. Headings are arranged alphabetically. Courses with numbers less than 100 do not fulfill degree requirements toward graduation and do not transfer as part of an associate degree. Course Credit notations, as shown within the parentheses; explain how many hours are required in a lecture and/or lab-type setting. For example, for a regular 16-week semester, a course with a (3-2) notation typically requires students to attend 3 hours of lecture and 2 hours of lab each week.

ACCOUNTING

ACCT 101 F,S
Practical Accounting (3-0) 3 Credits
This course is designed for students with no prior accounting course work or experience. Practical Accounting counts toward graduation in some disciplines and serves as a solid introduction to other accounting principles courses. Counts as three-hour elective in Business Administration.

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 101 or ACCT 201)

ACCT 201 F,S,SU
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,SU
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)

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 F,S
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)

ADMINISTRATIVE ASSISTANT

OA 102 S
Filing Systems and Records Management (3-0) 3 Credits
Students are introduced to the knowledge and skills needed in modern-day records management in various work settings. This comprehensive course studies basic filing rules, procedures, equipment, and manual and computerized management of records.

OA 107 F
College Keyboarding (3-0) 3 Credits
Students continue to develop decision-making and production skills through preparation of documents representative of various businesses.

OA 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.

OA 170, 171, 270, 271 As Needed
Topics in Business and Office Administration (1-3) 1-3 Credits
Instruction will be provided as the need arises on topics in business and office administration. If needed, the computer facilities at the college or at the business will be utilized. The course may be repeated if the topic is different.

OA 200 F
Word Processing I (3-0) 3 Credits
Students are introduced to word processing concepts, applications and skills. Speed and accuracy are improved through the production of business documents using IBM compatible computers. (Prerequisite: BSAD 125)

OA 211 S
Secretarial Office Procedures (3-0) 3 Credits
This course is designed to prepare the student to carry out the normal duties in a business office including a broad variety of business documents from memos and letters to comprehensive reports. Students practice a wide range of skills, such as: proofreading for errors, composing original documents, checking calculations, using organizational skills and decision making.

OA 231 F,S
Office Administration Internship (1-2)
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. (Prerequisites: 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 (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. (Prerequisites: AMT 111)

AMT 132 F
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)

AMT 142 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. (Prerequisites: AMT 111)

AMT 162 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 S
Introduction to Automated Robotics (3-0) 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 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. (Prerequisites: AMT 102 or Permission of Instructor; Co-Requisites: AMT 104)

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 S
Automated Robotic Programming (2-2) 3 Credits
This course is designed to provide entry 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. 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)

AGRICULTURE

For Veterinary Science Courses see Veterinary Technology

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

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: MATH 50 or 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: AGEC 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 F,S,SU
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 F,S,SU
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 F,S,SU
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 F,S,SU
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 As Needed
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 F,S,SU
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 F,S,SU
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.

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. (Prerequisite: CHEM 101 or 104, or 111 or permission of the instructor)

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.

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 F
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 F
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.

ALTERNATIVE ENERGY

ENER 105 F,S
Introduction to Energy (3-0) 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 142 F,S
Introduction to Wind (3-2) 4 Credits
This course will emphasize the basic concepts and principles of wind energy technology. Topics include the evolution of wind energy and turbine technology, basic turbine, blade, and tower components, tower/turbine siting, wind energy transference and turbine output, along with proper safety techniques used in the wind industry. Students will have lab experiences to acquire competencies in wind technology. A course fee will apply.

ENER 144 F,S
Wind Turbine Troubleshooting (3-2) 4 Credits
This course will cover the basic strategies and techniques used to troubleshoot, maintain, and repair mechanical and/or electrical problems in industrial machinery and how this relates to utility scale wind turbines. A course fee will apply. (Prerequisites: ENER 142, CNS 101)

ENER 155 Upon Request
Applied Science Institute
1 Credit (1-1) 2 Credit (1-2) 3 Credit (2-2)
This course presents alternative energy technology as applied to transportation. Technical and social issues are examined for electric and solar vehicles and alternative-fuel cars. The class includes hands-on experience with several types of alternatively powered vehicles. (This description represents a typical topic offering; course content varies by semester) A course fee will apply.

ENER 160 F,S
Introduction to Process Technology (3-0) 3 Credits
This course intends to provide basic concepts and principles concerning Process Technology common with power generation and general industry standards. Material used in this course is consistent with control and monitoring applications from the electrical generation field. Trained technicians are required to understand their role and responsibility within the environment they will work in. They must have a functional awareness of the equipment as well as system function. It may include the relationship of PLC's, diagnostic equipment, measurement systems, digital and analog readouts along with an understanding of general science and technology functions. Safety practices, procedures and regulatory guidelines will be integrated throughout the course work. A course fee will apply.

ENER 162 F,S
Introduction to Electric Power Transmission and Distribution (3-0 3 Credits
This is an overview study of the components, systems, and operations of power generation and power delivery. The course will look at the basic concepts and principles along with theory concerning the link between generation and conversion of power use. It will examine power collection methods, distribution of high and low voltage, underground transmission and sub-station operations. The course intends to give the student a general awareness of electrical control components, transformers and the general layout/architecture of the power grid. A variety of applications will be looked at so that the individual can realize the extensive reach of our power delivery system and network within the North American continent. It includes the connected relationship of science and technology of Alternative Energy as a growing method of power generation next to traditional systems. A course fee will apply. (Prerequisites: ENER 105, CNS 101)

ENER 200 F
Passive Solar Systems (4-2) 5 Credits
This class provides an overview of passive solar space heating systems and natural daylighting. It provides a foundation in insulation theory, energy conservation, heat flow calculations, alternative architecture and design theory of passive solar systems. Lab work is project-based for the design and evaluation of passive solar systems. A course fee will apply. (Prerequisite: Placement scores must indicate proficiency level of Math 100 or higher or have completed Math 50)

ENER 210 S
Solar Thermal Systems (4-2) 5 Credits
This class examines the design, installation, operation and maintenance of active solar equipment. Course topics include sizing hot water systems for residential applications and industrial heating. Other topics include concentrating collectors, tracking equipment, and solar cooling. System design, sizing, economics, installation, operation and maintenance are among the areas examined in detail. Lab work offers "hands-on" application of solar principles to practical projects. The class provides experience in the construction and installation of solar heating systems suitable for homes or small businesses. A course fee will apply. (Prerequisite: Placement scores must indicate proficiency level of Math 100 or higher or have completed Math 50)

ENER 220 F,S
Solar Electric Systems (4-2) 5 Credits
Solar Electric Energy presents the key components of photovoltaic (PV) conversion systems to produce electricity from sunlight. Solar module types and properties, balance of system components, stand-alone and utility interface, energy management, and economics for a variety of PV applications are studied. The course includes details of installation, operation, and evaluation of photovoltaic systems. Students will participate in a team-based design project. The course includes preparation for the NABCEP (North American Board of Certified Energy Practitioners) PV Associate exam. Lab provides hands-on experience with the key components of photovoltaic (PV) conversion systems to produce electricity from sunlight. The course includes details of installation, operation, and monitoring of PV systems. Students will participate in a team-based design and installation project. A course fee will apply. (Prerequisite: Placement scores must indicate proficiency level of Math 100 or higher or have completed Math 50)

ENER 232 F,S
Wind Turbine Internship (1-5) 3 Credits
The internship provides students with a supervised field experience. Students will gain hands-on experience with energy specific technologies. This opportunity increases students' occupational competency, industry awareness and professionalism. Students will spend approximately 80 hours in the field during the semester as an intern. A course fee will apply. (Prerequisites: Permission of Instructor; AMT 112, ENER 142, ENER 144)

ENER 256, 257, 258 Upon Request
Projects in Alternative Energy
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.)

ART & DESIGN

ART 101 F,S,SU
Art Appreciation (3-0) 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 F,S
Introduction to 2-D Design (2-4) 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 F,S
Introduction to 3-D Design (2-4) 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 F,S
Topics in Art (1-3) 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 F,S
Drawing I (2-4) 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 F,S
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 F,S
Ceramics I (2-4) 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 F,S
Sculpture I (2-4) 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 206 F,S
Drawing II (2-4) 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 F,S
Painting II (2-4) 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 F,S
Ceramics II/Pottery (2-4) 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 F
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)

AUTOMOTIVE TECHNOLOGY

AUTO 114 F
Auto Fuel Systems (2-4) 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, carburetion, 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 F
Engine Repair (2-6) 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 S
Automotive Brake Systems (2-4) 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 S
Automotive Electrical Systems (2-6) 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 F
Automotive Air Conditioning (2-4) 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 (4-2) 5 Credits
General Biology 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 and is required for biology majors. A practical laboratory component emphasizes scientific investigations and supports lecture material.

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 F,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 F,S,SU
Personal Finance (3-0) 3 Credits
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.

BSAD 110, 111, 210, 211 F,S
Leadership Development and Service Learning (1-0) 1 Credit
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)

BSAD 115 F,S
Computer Concepts (3-0) 3 Credits
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.

BSAD 121 F,S
Business Mathematics (3-0) 3 Credits
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.

BSAD 125 F,S,SU
Computer Applications (3-0) 3 Credits
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.

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

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

BSAD 218 S
Spreadsheets (3-0) 3 Credits
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)

BSAD 219 F
Database Management (3-0) 3 Credits
This course allows students to refine their skills in database applications. Microsoft Access will be used to teach advanced concepts in this software package. The course will include all concepts of using and creating database tables, reports, forms, and queries. (Prerequisites: BSAD 125)

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

BSAD 236 F
Business Statistics (3-0) 3 Credits
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)

BSAD 197, 198, 199, 297, 298, 299 As Needed
Topics in Business Administration (1-3) 1-3 Credits
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.

CERTIFIED MEDICAL ASSISTANT

MEDA 101 F
Introduction to Medical Assisting (3-0) 3 Credits
This is an introductory course that provides a knowledge base for medical assistant's interaction with ambulatory care patients. This course covers basic principles of psychology and human growth and development; focuses on communication in the medical office/ambulatory care setting; and focuses on legal and ethical responsibilities in patient care and management: laws pertaining to medical practice and medical assistants, application of medical ethics in performance of duties. (Prerequisites: College level reading & ENGL 100 and MATH 100 placement or equivalent)

MEDA 102 F
Dosage Calculation & Medication Administration (2-0) 2 Credits
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. (Prerequisites: MATH 100 or higher)

MEDA 103 F
Medical Assisting Science I (4-0) 4 Credits
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. This course also identifies the relationship of food and nutrition to health. It covers the application of basic nutrition principles to personal well-being and the importance of nutrition in preventing chronic diseases. (Prerequisites: MEDA 101 & MEDA 102 or taken in the same semester)

MEDA 104 F
Clinical Medical Assisting I (2-0) 2 Credits
Clinical Medical Assisting I provides principles of basic clinical care skills as an assistant to a physician in an ambulatory care facility setting. It also provides instruction and prepares for preforming medical office procedures and diagnostics tests and follow-up care. (Prerequisites: MEDA 101 & MEDA 102 or can be taken in the same semester)

MEDA 105 F
Administrative Medical Assisting I (2-0) 2 Credits
This course presents basic concepts and applications of computers and computer systems in administrative medical assisting practice. The course provides beginning instruction in administrative medical assisting practice in the front office. (Pre- or co-requisite: MEDA 103)

MEDA 203 S
Medical Assisting Science II (4-0) 4 Credits
This course covers basic concept and characteristics of disease processes; etiology, methods of control, and development of selected diseases from each major body system and application of principles to the function of the medical practice. This course includes an overview of the broad scope of pharmacology, and a survey of medications commonly used in the prevention, diagnosis, and treatment of diseases. (Prerequisites: MEDA 103, MEDA 104, and MEDA 105)

MEDA 204 S
Clinical Medical Assisting II (3-0) 3 Credits
This course prepares the student to carry out clinical care procedures as an assistant to a physician in an ambulatory care facility setting. This course 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. (Prerequisite: MEDA 104)

MEDA 205 S
Administrative Medical Assisting II (3-0) 3 Credits
This course provides further instruction in administrative medical assisting practice and the application of computers in medical

assisting in the front office, administrative practice including transcription of medical reports and documentation, coding, and maintaining patient records and accounts. (Prerequisite: MEDA 105)

MEDA 206 S
Medical Assisting Internship (0-7.5) 5 Credits
This course provides clinical experience for the development of professional characteristics as a practicing Medical Assistant. (Prerequisites: MEDA 204 & MEDA 205 or can be taken in same semester)

MEDA 207 S
Medical Assisting Critique (1-0) 1 Credits
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. (Pre-or co-requisites: MEDA 204 & MEDA 205; Co-requisite: MEDA 206)

CERTIFIED NURSING ASSISTANT

MUST BE 18 BY COURSE COMPLETION

CNA 101 F,S
CNA Techniques (5-0) 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 by course completion)

CNA 102 F,S
CNA Clinical Experience (0-4) 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 care team work, medical observation, documentation and reporting techniques, and patient assessment. A course fee will apply. (Co-requisite: CNA 101)

CNA 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: CNA 104)

CNA 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: CNA 103)

CNA 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. A course fee will apply.

CNA 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.

CNA 110 S
Restorative Nurse Assistant (2-0) 2 Credits
The Restorative Nurse Assistant (RNA) is an expanded role for the Certified Nurse Assistant. The RNA acquires special knowledge, skills, and techniques in therapeutic rehabilitation as prescribed and supervised by licensed personnel. (Prerequisites: CNA 101, CNA 102 or Active CNA Certification; Co-requisite: CNA 111)

CNA 111 S
Restorative Nurse Assistant Clinical Experience (0-2.5) 1 Credits
The RNA 102 course is a clinical preparatory course to enable the student to gain 40 hours of clinical experience in a hospital, clinic, nursing home, or health care setting providing basic restorative nursing care. (Prerequisites: CNA 101, CNA 102 or Active CNA Certification; Co-requisite: CNA 110)

CNA 120 F
Certified Medication Technician (4-0) 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)

CNA 130 F
Basic Pharmacology (3-0) 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.

CHEMISTRY

CHEM 101 F,S,SU
Survey of Chemistry (4-2) 5 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 F,S
Chemistry for Health Sciences (4-2) 5 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 F
General Chemistry I (4-2) 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 S
General Chemistry II (3-4) 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 Upon Request
Quantitative Analysis (3-4) 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 F,S,SU
College Orientation (1-0) 1 credit
Successful completion of the College Orientation course and its Service Seed component are required for all degree or certificate seeking students within their first semester of enrollment at Crowder College. Transfer students who have successfully completed college orientation elsewhere or have a cumulative grade point average of 2.0 on a minimum of 12 credits are exempt from this course. 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.

COLLISION REPAIR
(AUTO BODY)

CLRP 102 F
Auto Body Construction and Sheet Metal (2-2) 3 Credits
This course introduces the topics of non-structural and structural repair. Students become familiar with safe practices in the shop as well as the various tools and equipment used in the trade including lifting, measuring, cleaning, and finishing devices. Steel straightening, damage analysis, and the preparation of customer estimates are also covered. Classes are built around learning modules licensed from I-CAR (Inter-Industry Conference on Auto Collision Repair) which include both classroom and hands-on shop exercises with competencies cross-indexed to ASE/NATEF (Automotive Service Excellence/National Automotive Technicians Education Foundation). A course fee will apply.

CLRP 104 F
Auto Body Plastics and Composites (2-2) 3 Credits
This course covers damage analysis/repair coverage to frontal impact and interior damage, exterior trim/hardware repairs, use of plastic adhesives, and advanced measurement systems. Classes are built around learning modules licensed from I-CAR (Inter-Industry Conference on Auto Collision Repair) which include both classroom and hands-on shop exercises with competencies cross-indexed to ASE/NATEF (Automotive Service Excellence/National Automotive Technicians Education Foundation). A course fee will apply.

CLRP 202 S
Auto Body Welding and Structural Straightening (2-2) 3 Credits
This course moves into the repair of bolted-on components and other areas requiring the use of gas-metal arc welding (GMAW). Additional time is also devoted to the advanced use of body fillers and repairs to both fixed and movable glass components. Classes are built around learning modules licensed from I-CAR (Inter-Industry Conference on Auto Collision Repair) which include both classroom and hands-on shop exercises with competencies cross-indexed to ASE/NATEF (Automotive Service Excellence/National Automotive Technicians Education Foundation). A course fee will apply.

CLRP 204 S
Auto Body Painting and Refinishing (2-2) 3 Credits
This course covers aligning/repairing the vehicle frame, working with aluminum body parts, and the final steps in the painting/finishing process. Finding and repairing wind noise and water leaks is also addressed. Classes are built around learning modules licensed from I-CAR (Inter-Industry Conference on Auto Collision Repair) which include both classroom and hands-on shop exercises with competencies cross-indexed to ASE/NATEF (Automotive Service Excellence/National Automotive Technicians Education Foundation). A course fee will apply.

COMPUTER AND NETWORK SUPPORT

CNS 101 F,S,SU
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 105 F,S
Technical Career Development (1-0) 1 Credit
This course guides students through employability skills activities that are covered in seven levels of the program. Course includes activities that closely align with the competencies outlined by the U.S. Secretary of Labor's Commission on Achieving Necessary Skills (SCANS). It includes a school-to-work curriculum and provides the tools to strengthen school-based learning, work-based learning and connecting activities. Lessons include self-assessments in communications skills, ethics, conflict resolution, government awareness, time management skills, career research, interviewing knowledge and others.

CNS 106 F,S
Technical Career Development (1-0) 1 Credit
This course is a continuation of CNS 105. Course includes the activities that closely align with the competencies outlined by the U.S. Secretary of Labor's Commission on Achieving Necessary Skills (SCANS). It includes a school-to-work curriculum and provides the tools to strengthen school-based learning, work-based learning and connecting activities. Lessons include identifying stress sources, characterizing a positive image, complete a job application, and complete a job resume. Component emphasizes scientific investigations and supports lecture material. A course fee will apply. (Prerequisites: CNS 105 or Permission of Instructor)

CNS 111 F,S
PC Basics I (2-2) 3 Credits
This course covers the fundamentals of the internal PC hardware and peripheral devices (PC = "Personal Computer" = Intel-based X86 architecture), 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 (2-2) 3 Credits
This course addresses the software side of the PC 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 115 F,S
Cisco Networking I (2-2) 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 (2-2) 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 125 S
Programming for CNS Technicians (2–2) 3 Credits
This course provides basic computer programming skills for computer technology students who are not enrolled in a computer science-based program and whose math skills incorporate only introductory algebra. Emphasis will be placed on learning basic program structures, flow charting, and development of simple applications using an entry-level programming language. A course fee will apply.

CNS 217 F,S
Cisco Networking III (2-2) 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 (2-2) 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 250 F
Linux Network Administration (2-2) 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 260 F
Microsoft Network Administration (2-2) 3 Credits
This course is designed to prepare students for the responsibilities of being a network administration technician using the Microsoft Windows Server family of server operating systems. It provides hands-on experience incorporating Microsoft's client/server-based products such as Active Directory (AD), Internet Information Services (ISS), and Distributed File System (DFS). A course fee will apply. (Co-requisites: CNS 112 or Permission of Instructor)

CNS 265 S
Microsoft Exchange Administration (2-2) 3 Credits
This course covers the installation, configuration, and day-to-day administration of Microsoft Exchange Server, Microsoft's broad-based, database-oriented messaging service. This service provides both an efficient e-mail component as well as easily manageable/scalable interfaces to modern devices such as cellular telephones, personal digital assistants, and the like. Students will receive hands-on practice in all aspects of Microsoft Exchange administration. A course fee will apply. (Prerequisites: CNS 260 or Permission of Instructor)

CNS 270 F,S
Network Security (2-2) 3 Credits
This course provides a broad view of the entire field of information security, background on many related elements, and enough detail to facilitate an understanding of the topic as a whole. This course will cover the terminology of the field, the history of the discipline, and the strategies for managing an information security program. A course fee will apply.

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 S
Advanced Microsoft Server (2–2) 3 Credits
This course provides 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: CNS 260 or Permission of Instructor)

CNS 277 S
Data Management (2-2) 3 Credits
This course introduces the fundamental concepts necessary for designing, using, and implementing database systems and database applications. The student will be introduced to database management software, including Basic Structured Query Language (SQL). Through a combination of classroom lectures, hands-on labs, and desktop learning tools, students will develop both critical thinking and problem-solving skills. A course fee will apply. (Prerequisites: CNS 125)

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 140 S *(Even Years)*
RPG Programming (2-2) 3 Credits
Introduces the programming language RPG/400 that is designed for quick and efficient production of business reports. Includes language syntax and practice in preparing, compiling and executing applications of increasing complexity. (Prerequisite: COMP 111 and MATH 135)

COMP 200 S *(Odd Years)*
COBOL (2-2) 3 Credits
Computer programming concepts in the COBOL language, a widely used business oriented language, are examined. Instructional topics include: programming methodologies, program divisions, control breaks and file maintenance. (Prerequisite: COMP 111 and 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 103 F
Sustainable Building Fundamentals (2-2) 3 Credits
Provides an introductory survey of new and existing building technologies which enhance energy efficiency, livability, and sustainability of a structure. The course is based on the NCCER (National Center for Construction Education and Research) curriculum modules "Your Role in the Green Environment," "Introduction to Weatherization" and "Sustainable Construction Supervisor". Particular emphasis will be placed on those technologies and best practices endorsed by the US DOE (U.S. Department of Energy), the USGBC (U.S. Green Building Council), and the LEED (Leadership in Energy and Environmental Design) Certification Program. A course fee will apply.

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 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 Ventilation) 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, conductors/cables, electrical drawings, residential and commercial services, test equipment and materials and labor estimating. A course fee will apply. (Prerequisite: CONS 105 or AMT 111 or AMT 112 or Permission of Instructor)

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 243 S
Project Supervision (2-2) 3 Credits
This course provides introductory material relevant to front-line supervision in construction technology and is built upon NCCER's (National Center for Construction Education and Research) Project Supervision module. Topics covered include orientation to the job, human relations, problem solving, safety, quality control, contract/construction documents, document control/estimating, planning/scheduling, and resource control/cost awareness. A course fee will apply. (Prerequisite: CONS 112 or Permission of Instructor)

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 264 S
Geothermal Heat Pump Systems (2-2) 3 Credits
This course provides an overview for designers of geothermal or ground-source heat pump systems (GSHP) and addresses fundamental principles, physical/thermal constraints, design/ configuration of ground loops/piping, determination of building heating/cooling requirements, integration of ground and building systems, typical installation procedures, and environmental/regulatory issues. Instruction will consist of lecture/lab sessions and, as much as practical, scheduled field trips to observe GSHP installations in progress. A course fee will apply. (Prerequisite: CONS 155 or Permission of Instructor)

CONS 265 F
Alternative Energy Techniques (2-2) 3 Credits
Provides an overview of the various alternative energy technologies currently available or on the verge of becoming economically viable. This course introduces students to the Power Industry in general and the overall concepts of alternative energy usage and economics. Topics covered in the course include Biomass and Biofuels, Nuclear Power, Solar Power, and Wind Power with special focus on those technologies (Wind and Solar) most adaptable to energy efficient building applications. This course is based upon NCCER's (National Center for Construction Education and Research) materials for Alternative Energy. A course fee will apply. (Prerequisite: CONS 102 and CONS 105 or Permission of Instructor)

CONS 268 S
Energy Usage Auditing (2-2) 3 Credits
This course is based on NCCER's (National Center for Construction Education and Research) Building Auditor, Level 2, materials and provides background information on heating/ cooling, chimneys/ vents/flues, hydronic systems, energy conservation equipment, indoor air quality and alternative heating/cooling systems. This course also provides detailed guidance for the performance of a complete building energy audit including interviewing, testing, and reporting. A course fee will apply. (Prerequisite: CONS 155 and CONS 103 or Permission of Instructor)

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 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 150 F
Corrections Officer (2-2) 3 Credits
This course assist in developing effective and efficient Corrections Officers in law enforcement, corrections and correctional probation. Course will address the entry level officer training, through topics such as Ethics, professionalism, State rules and regulations. The course will address Legalities such as Legal Terminology, Constitutional Law, Subpoena, and Civil and Criminal Liability. Students will be trained in the subjects of Classes of Offenses, Use of Force, and Restoration of Civil Rights. A course fee will apply.

CJ 190 F,S
Patrol Operations 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 220 S
Security Officer (2-2) 3 Credits
This course will address the entry level officer training, through topics including basic crime scene investigation, report writing, communications, interviewing and interrogation, law and the private sector, active threats and use of force situations. Students will demonstrate understanding through the use of mock crime scenes, scenarios, and varied use of force simulators. A course fee will apply.

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 275 F,S
The Juvenile Justice System (3-0) 3 Credits
The Juvenile Justice System is designed to provide an overview of the juvenile justice system as it operates within the criminal justice system. The course will introduce you to the historical evolution and theoretical perspectives of the juvenile justice system. It will also survey the roles of law enforcement, the courts, and juvenile corrections, as well as programs, prevention and the future of the juvenile justice system. A course fee will apply.

CJ 280 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 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 F
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 S
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 F
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 S
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 F
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 F
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 S
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 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 F
Air Conditioning (2-4) 4 Credits
This study of the theory and operation of air conditioning systems as they are used with industrial 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
Diesel Internship (0-10) 4 Credits
The student will receive on-the-job experience in a designated 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 F,S
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 S
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 102 F
Descriptive Geometry (2-2) 3 Credits
This course adds to the introduction of drafting fundamentals. The primary focus is on entry-level geometry construction techniques for board and AutoCAD Command usage, drawing commands, viewing commands and modifying 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 103 S
Technical Drawing (2-2) 3 Credits
This course is the second introduction to drafting class. The primary focus is on entry-level Board and Auto CAD Command usage, drawing commands, viewing commands and modifying commands. Topics include drawing the different types of fasteners, springs, cams, welding symbols, steel details and basic structural drawing. Editing and viewing commands, drafting practices and standards, file management practices and practical uses of CAD drawings. A course fee will apply.

DRFT 105 S
Architectural Drafting (2-2) 3 Credits
This course is an introduction to residential construction and house design. Students are required to interview prospective clients, write a project description, and draw a set of architectural plans that include floor plans, electrical plans, elevations and construction details. The course will include components from both traditional (manual) and Computer Assisted Drafting (CAD). 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 120 F,S
Basic Civil Drafting (2-2) 3 Credits
This course is an introduction to Basic Civil drafting utilizing Computer Aided Design (CAD) with Land Desktop and Eagle Point software which is used primarily to create drawings for civil engineering projects. Command usage, drawing methods, commands, viewing commands, and modifying commands will be covered. Topics include terminology, surveys, contouring, project development, drafting practices and standards, file management practices and practical uses of the software. A course fee will apply. (Prerequisite: DRFT 101)

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 144 F
Weldment and Structural Drawings (.5-1) 1 Credit
This course introduces specialized areas of drafting such as: threaded fasteners, assembly sections, welding drawings, electrical drawings, piping drawings and structural drawings. A course fee will apply. (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 202 S
Machine Design (2-2) 3 Credits
This course is designed to bring together the practical applications, skills and knowledge developed in previous drafting and design courses. The electrical and mechanical components, which are commonly utilized in a machine, which will convert a power source to work output, will be discussed. These components will then be applied to machine design projects. A course fee will apply. (Prerequisite: sophomore standing)

DRFT 203 S
Tool and Die Design (2-2) 3 Credits
This course is designed to give the drafting student a basic functional background important in the design of jigs & fixtures. General practices followed in the design of jigs & fixtures used in the production of consumer products will be covered. A course fee will apply. (Prerequisite: DRFT 101, 141)

DRFT 205 F
Intermediate Computer Aided Drafting (2-2) 3 Credits
This course is designed as a continuation of Basic Computer Aided Drafting (DRFT 115) with the addition of Auto CAD's advanced capabilities including: Associate Dimensioning, "Trace", calculating strategy, Building Blocks, Symbol library creation, Bill of Materials generation, Isometrics and other three dimensional drawings. A course fee will apply. (Prerequisite: DRFT 115)

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)

DRFT 220 S
Introduction to Geometric Dimensioning & Tolerancing (3-0) 3 Credits
Geometric Dimensioning and Tolerancing is the study of the international standards for specifying the location and size of part features. This course is a general orientation to the concepts involved. A course fee will apply. (Prerequisite: DRFT 101)

DRFT 280 F,S
Drafting and Design Internship (3-0) 3 Credits
This course is a capstone course designed to prepare students for the responsibilities of being a draftsman/designer and is focused on obtaining hands-on experience in a "real-world" design environment. The other courses completed before taking this practicum course will provide them with the appropriate skills to complete this course. During the course, students spend 120 hours completing hands-on tasks at the physical location of a designated hosting organization. (Prerequisites: Completion of 30 hours of required technical courses or Permission of Instructor)

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 or 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 criminal background check. Concurrent enrollment in ECD 201 is expected)

ECONOMICS

ECON 201 F,S,SU
Principles of Economics I (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 Reading Level 1) (MATH 100 or higher is recommended)

ECON 202 F,S,SU
Principles of Economics II (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 Reading Level 1) (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 150 F,S
Introduction to Teacher Education (1-0) 1 Credit
This course familiarizes students with the personal and professional demands of teaching, explores the field of teaching, and introduces teacher education programs and certifications. In introducing students to the educational field, the course depicts teaching in its realistic intricacies and describes the considerations of professional teaching. This course is intended for students interested in pursuing the Associate of Arts in Teaching (AAT) degree program. To successfully complete EDUC 150, students must have by the end of the course a current criminal background screening and complete the Missouri Educator Profile. A grade of "B" or higher is required for students to continue in the AAT program.

EDUC 204 F,S
Foundations of Education in a Diverse Society (3-0) 3 Credits
This course is designed to examine the historical, philosophical, sociological, political, economic, and legal foundations of the American public education system. Students will explore the nature of school environments, design, and organization of school curricula and characteristics of effective schools and instruction in grades P-12. Educational structures, practices, and projections for the future will be studied. (Prerequisite: Reading and writing at least at college level)

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
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
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 the application of psychological principles to teaching, learning, and assessment and the educational practice in P-12 classrooms. It will focus on the learner and the learning process, teacher characteristics, and classroom processes that increase student motivation. Student diversity and appropriate instructional strategies for students with special needs will also be introduced. (Prerequisite: PSYC 101)

EDUC 251 F,S
Teaching Profession with Field Experience (3-0) 3 Credits
This course provides students an opportunity to observe teaching and learning for thirty (30) hours or more in P-12 classrooms. Students are introduced to the requirements for teacher preparation and certification. Students will examine characteristics of effective teaching. The course is designed to assist students in determining if a career in teaching is an appropriate goal. (Prerequisite: ENGL 101 & EDUC 150)

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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

EMR 101 F
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
CPR certification is required by the state of Missouri before this course can be taken. The Emergency Medical Technician Program includes a twelve (12) hour hospital observation in the emergency room as well as thirty-six (36) hours in an ambulance. Topics of the course span human anatomy and physiology; vital signs and their interpretations; cardiopulmonary resuscitation; control of bleeding, bandaging and splinting; effects of medical emergencies on the body and their treatments, including heart attack, stroke, communicable diseases, child birth and child patients, diabetes mellitus and chronic obstructive pulmonary disease. This course is approved by the Missouri Department of Health, Bureau of Emergency Medical Services and will allow successful students to sit for the state certification exam for licensure. A course fee will apply. (Prerequisites: AHA Healthcare Provider level CPR certification, fingerprint background check at the cost of the student PRIOR to acceptance into program; and college level reading. Acceptance to EMT course required 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 Stated 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 Paramedic National Standard Curriculum. In this course the students will to medical patient assessment, respiratory and cardiovascular emergencies, airway management strategies, capnography, ECG interpretation and pharmacology integration. A course fee will apply. (Prerequisites: EMTP 225 & AHA BLS Healthcare Provider level card required)

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 neurological, 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 Paramedic National Standard Curriculum. In this course, the students will be exposed to recognizing, assessing and managing patients with acute injuries, obstetrical, neonatal/pediatric emergencies and EMS operations. 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 250 S,S
Emergency Medical Technician – Paramedic Captstone (0-18) 6 Credits
This is the fifth of five courses which follow the United States Department of Transportation Paramedic National Standard Curriculum. In this course, the students will be exposed to intrahospital and out-of-hospital (OOH) clinical experiences. The purpose of clinical education is to provide students with opportunities to reinforce knowledge, skills, and abilities acquired in the classroom and laboratory settings. When provided with opportunities to practice with actual patients, students transition from a basic understanding to an advanced level of comprehensive data-gathering, application and analysis. (Prerequisites: EMTP 250, AHA BLS Healthcare Provider level CPR certification & approval from Program Director/Medical Director.

ENGLISH AND LITERATURE

ENGL 100 F,S,SU
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 skill 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 (3-0)
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 or completion of LOC 50)

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 120 S
Masterpieces of 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 a Shakespearean masterpiece. The time period studied begins with the Classical Age and continues through the Renaissance. This course partially fulfills general education humanities requirements. (Prerequisite: College level reading score on appropriate placement exam)

ENGL 125 F,S,SU
Masterpieces of World Literature II (3-0) 3 Credits
A survey of landmarks of world literature from the eighteenth century to the twentieth century Western thought. Readings are selected from Moliere, Swift, Voltaire, Chekhov, Ibsen, Tolstoy, Kafka, and others. A course fee will apply. (Prerequisite: College level reading score on appropriate placement exam)

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)

FIRE SCIENCE

FSCI 102
Building Construction Related to Fire Service (3-0) 3 Credits
This course provides the components of building construction that relate to fire and life safety. The focus of this course is on firefighter safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at emergencies. (Prerequisite: FSCI 111 or Firefighter I & II certification)

FSCI 103
Fire Investigations (3-0) 3 Credits
This course is intended to provide the student with the fundamentals and technical knowledge needed for proper fire scene analysis and interpretations, including recognizing and conducting origin and cause, preservation of evidence, evidence collection, scene documentation, scene security, motives of the fire setter, and types of fire causes. (Prerequisites: FSCI 111 or Firefighter I & II certification)

FSCI 107
Fire Service Hydraulics & Fire Pump Operations (3-0) 3 Credits
This course provides a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems. (Prerequisites: FSCI 111 or Firefighter I & II certification)

FSCI 108
Fire Protection Systems (3-0) 3 Credits
This course provides information relating to the features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers. (Prerequisites: FSCI 111 or Firefighter I & II certification)

FSCI 109
Legal Aspects of Emergency Services (3-0) 3 Credits
This course introduces the Federal, State, and local laws that regulate emergency services, national standards influencing emergency services, standard of care, tort, liability, and a review of relevant court cases.

FSCI 111
Firefighter I and II (4-4) 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.

FSCI 202
Hazardous Materials (3-0) 3 Credits
A second semester of the review of basic fundamentals of chemistry used in fire science emphasizes less common special hazards. Topics covered include nuclear reactions, ionization, radiation detection equipment, peace time uses of radioactive materials, and control of resulting hazards. (Prerequisites: FSCI 111 or Firefighter I & II certification)

FSCI 205
Tactics & Strategies (3-0) 3 Credits
This course provides an in-depth analysis of the principles of fire control through utilization of personnel, equipment, and extinguishing agents on the fire ground. The course will cover aspects of incident command, company operations, special situations and occupancies, and post incident activities. (Prerequisites: FSCI 111 or Firefighter I & II certification; FSCI 108)

FSCI 207
Fire Prevention/Code Enforcement (3-0) 3 Credits
This course provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of fire hazards, and the relationships of fire prevention with built-in fire protection systems, fire investigation, and fire and life-safety education. (Prerequisite: FSCI 111 or Firefighter I & II certification; FSCI 108)

FSCI 208
The Company Officer (3-0) 3 Credits
This course introduces the student to the organization and management of a fire department and the relationship of government agencies to the fire service. Emphasis will be placed on fire service leadership from the perspective of the company officer. (Prerequisite: FSCI 111 or Firefighter I & II certification; FSCI 109 preferred)

FSCI 210
Fire Service Instructor (3-0) 3 Credits
This course covers the roles of a fire service instructor, the characteristics of an effective instructor, various aspects of communication, challenges facing emergency services instructors, different aspects of professional development, the importance of instruction, and common instructional techniques. (Prerequisite: FSCI 111 or Firefighter I & II certification; COMM 104 recommended)

FSCI 212
Occupational Safety & Health for the Fire Service (3-0) 3 Credits
This course introduces the basic concepts of occupational health and safety as it relates to emergency service organizations. Topics include risk evaluation and control procedures for fire stations, training sites, emergency vehicles, and emergency situations involving fire, EMS, hazardous materials, and technical rescue. Upon completion of this course, students should be able to establish and manage a safety program in an emergency service organization. (Prerequisites: FSCI 111 or Firefighter I & II certification)

FSCI 260, 261, 262, 263
Problems in Fire Science 1-4 Credits
Course content is assigned by the instructor and approved by the Associate Dean of Technical Education.

GEOGRAPHY

GEOG 111 F,S
World Regional Geography (3-0) 3 Credits
Emphasis in this study of the realms, 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 F,S
Introduction to Geology (4-2) 5 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. This course will partially fulfill the science requirements for the Associate of Arts degree.

GEOL 210 S
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 F,S
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 F,S
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 F
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 F
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 S
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)

HISTORY

HIST 101 F,S
Western Civilization I (3-0) 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 S
Western Civilization II (3-0) 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. HIST 102 is a Social Science, not a Humanities, course. (Prerequisite: Reading at least at college level) (Note: HIST 101 is not a prerequisite for HIST 102)

HIST 106 F,S,SU
U.S. History I (3-0) 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. Successful completion of History 106 at an accredited Missouri college fulfills the Missouri State requirements in constitutional study and partially fulfills Social and Behavioral Science general education requirements. (Prerequisite: Reading at least at college level)

HIST 107 F,S
U.S. History II (3-0) 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 partially fulfill 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 Upon Request
Topics in History (1-3) 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)

HONORS

HONR 151, 152, 251, 252 F,S
Honors Seminar 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)

HONR 103, 104, 203, 204 F,S
Special Topics in Honors 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 S
Honors English Composition
3 Credits
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 F
National, State, Local Gov/t- 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. (Prerequisite: admission to Honors Program or consent of the instructor and reading at the college level)

JOURNALISM AND PUBLIC RELATIONS

COMM 101 S
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 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 an applied journalism course in which the *Sentry*, the student newspaper, is used as a model for the forms and purposes of all phases of journalism: newsgathering, feature writing, layout, advertising and photography. (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
Instruction and practice of gathering news materials, writing news reports and logos, rewriting, and preparing photos for layout

will be given in the production of the Sentry. (Prerequisite: COMM 150)

COMM 152 F,S
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 160 Upon Request
Introduction to Broadcasting (3-0) 3 Credits
This course will acquaint students with the historical development of the broadcasting industry, to help gain an appreciation of the roles of broadcasting in a free society and the role government and regulation played in the development of broadcasting.

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 Upon Request
Internship (0-8) 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 S
Photocommunication II (3-0) 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 F,S
Computer Journalism, Layout and Production (2-2) 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 F,S
Journalistic Editing (2-2) 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 F,S
Applied Journalism (1-0) 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 F,S
Beginning American Sign Language I (3-0) 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 S
Beginning American Sign Language II (3-0) 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 100
Introduction to Spanish Vocabulary, Culture and Conversation (3-0) 3 credits
This course introduces students to Spanish vocabulary, culture, and conversation. Audio and video materials supplement class practice. This is not a substitution for SPAN 101 and does not fulfill any requirements for a foreign language credit. Not offered at the Neosho campus.

SPAN 101 F,S
Beginning Spanish (3-0) 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 S
Beginning 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 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 Upon Request
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 F
Conversational Spanish (3-0) 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. (Prerequisites: SPAN 102 or equivalent)

SPAN 106 S
Basic Conversational Spanish II (3-0) 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. (Prerequisite: SPAN 105 or equivalent)

SPAN 111 S
Introduction to Spanish for Health Care Workers (2-2) 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.). This course is not a Spanish language (grammar) course per se, but it designed to teach health care workers how to do specific tasks in Spanish. As such, there is no specific Spanish prerequisite to be enrolled in this course. 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 the Humanities Elective education requirement for the Nursing Program, or may apply toward an elective requirement for an A.A in Spanish, but may not apply toward both.

SPAN 112 F
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 the Humanities Elective education requirement for the Nursing Program, or may apply toward an elective requirement for an A.A. in Spanish, but may not apply toward both. (Prerequisite: SPAN 111 or permission of instructor)

SPAN 107, 108, 109, 207, 208, 209 SDL/Upon Request
Topics in Spanish 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.

SPAN 201 F
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 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 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 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 201 or permission of instructor)

LEARNING OPPORTUNITIES

COMM 80 F,S
Introduction to Communications (2-0) 2 Credits
This course focuses on the study of basic grammar and mechanics of composition including an analysis of subjects, verbs, sentence structure, and punctuation. The course is required of some students as determined by scores on placement tests and is recommended for students returning to school from a prolonged absence. The course is offered on a credit/no credit basis, with 80% or better required to receive credit. A letter grade will not be given and there will be no impact on the student's grade point average. Students must earn credit for the course or reach the appropriate Crowder placement score in order to take further composition courses. These credits cannot be applied toward graduation requirements. (Placement by Crowder Standard Placement Exam) A course fee will apply.

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 40 F,S
Reading Enhancement I (2-0)
2 Credits
Students will be taught basic reading strategies to facilitate comprehension of expository and narrative text. The course is offered on a credit/no credit basis, with 80% or better required to receive 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. (Prerequisite: Placement by Crowder Standard Placement Exam)

LOC 50 F,S
Reading Enhancement II (2-0)
2 Credits
This is a course for students needing to improve specific reading skills. Emphasis will be on adequate reading preparation, increasing reading speed and improving vocabulary and comprehension through the development of literal, critical and effective reading skills. These skills will be taught through a variety of textbook exercises, tests, computer software, quizzes and readings. In addition, outside reading/writing may be utilized to further ensure development of skills. The course is offered on a credit/no credit basis, with 75% or better required to receive 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. (Prerequisite: LOC 40 or Placement by Crowder Standard Placement Exam)

LOC 90 F,S
Reading Across the Curriculum (3-0)
3 Credits
This course is designed to improve reading skills necessary to succeed in college level courses across disciplines. Emphasis is on critical reading techniques, content-specific vocabulary and efficient comprehension. A variety of readings, assessments, and supplemental exercises are included to enhance the development of the various reading skills. The course is offered on a credit/no credit basis, with 70% or better required to receive 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. (Prerequisite: LOC 50 or Placement by Crowder Standard Placement Exam)

LOC 100 F,S
College Success (3-0) 3 Credits
This course is designed to increase success in college by assisting you in acquiring and mastering the skills necessary for you to reach your personal and educational goals. Course topics will 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 one may face as a college student. Successful completion of College Success is required for students placing in three or more developmental courses.

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 you in acquiring and implementing many proven strategies for creating greater academic, professional, and personal success. To explore these strategies we will use individual and group discussions, activities, and assignments, guided journal writing, as well as personal one-on-one meetings. 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)

LOC 105
Career Directions (1-0) 1 Credit
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
Career Exploration (0.5-1.25) 1 Credit
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 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 F,S
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,SU
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 a student to succeed in MATH 130. This course will not count towards degree requirements.

MATH 100 F,S,SU
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 S
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 preparatory course is for students who have inadequate preparation for taking MATH 100. It 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. This course will satisfy most degree requirements in Mathematics and should transfer to most four-year institutions. (Prerequisite: An appropriate math placement score)

MATH 130
Elementary Statistics (3-0) 3 Credits
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, SU
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, but will satisfy most degree requirements in Mathematics and should transfer to any four-year institution. (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)

MEDICAL ADMINISTRATIVE ASSISTANT

OA 102 S
Filing Systems and Records Management (3-0) 3 Credits
Students are introduced to the knowledge and skills needed in modern-day records management in various work settings. This comprehensive course studies basic filing rules, procedures, equipment, and manual and computerized management of records.

OA 107 F
College Keyboarding (3-0) 3 Credits
Students continue to develop decision-making and production skills through preparation of documents representative of various businesses.

OA 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.

OA 170, 171, 270, 271 As Needed
Topics in Business and Office Administration (1-3) 1-3 Credits
Instruction will be provided as the need arises on topics in business and office administration. If needed, the computer facilities at the college or at the business will be utilized. The course may be repeated if the topic is different.

OA 200 F
Word Processing I (3-0) 3 Credits
Students are introduced to word processing concepts, applications and skills. Speed and accuracy are improved through the production of business documents using IBM compatible computers. (Prerequisite: BSAD 125)

OA 212 S
Medical Office Procedures (3-0) 3 Credits
This course enhances the medical office specialist curriculum. Various reports and forms processed through medical records are examined as to format and content. An introduction to basic medical terminology is included to facilitate lab practice. A discussion of legal and ethical aspects stresses the parameters of responsibility in processing medical reports.

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

OA 233 F,S
Medical Office 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. A course fee will apply. (Sophomore level)

OA 225 S
ICD Coding (2-2) 3 Credits
This course introduces the theory, structure, and organization of the ICD (International Classification of Diseases) coding system. The principles, guidelines, and conventions utilized to accurately assign codes to diagnoses and procedures with ICD are examined. A course fee will apply. (Prerequisites: OA 215)

OA 235 S
CPT Coding (2-2) 3 Credits
This course introduces the theory, structure, and organization of the CPT (Current Procedural Terminology) coding system. The principles, guidelines, and conventions utilized to accurately assign codes to procedures with CPT are examined. A course fee will apply. (Prerequisites: OA 215)

MUSIC

MUSC 101 F,S,SU
Music Appreciation (3-0) 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 105 F,S
Elementary Class Piano I (1-2) 1 Credit
For the beginning pianist, dynamic group learning introduces the keyboard. Scales, chords and the harmonization of simple melodies are studied.

MUSC 106, 107, 206, 207 F,S
Chorale (0-3) 1 Credit
This course is open to all college students who like to sing. Functions include preparation and performance of a large variety of works. Credit is given for participation each semester in accordance with course number sequence shown.

MUSC 112 S
Voice for Theatre Majors 1 Credit
This is a course for Theatre majors who need singing skills for musicals. The course will be offered as needed. (Prerequisite: permission of the instructor)

MUSC 115 F,S
Elementary Class Piano II (1-2) 1 Credit
This course is a continuation of elementary Class Piano I with the study of beginning standard piano literature.

MUSC 118, 119, 218, 219 S
Music-Theatre Participation 1-2 Credits
This course offers credit to students who participate in music-drama productions under supervision of the music instructor. Hours are to be arranged. A maximum of four credit hours may be applied toward graduation if the course is repeated. (Prerequisite: permission of the instructor)

MUSC 195, 196, 295, 296 F
Community Mixed Chorus (0-4) 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 F,S
Private Lessons (Open to All Students) 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

NURSING

ADN 163 S
Nursing Concepts I (3-0) 3 Credits
This course provides exploration of the concepts and theories that support the nursing role. Emphasis will be on critical thinking and the nursing process. Professional, legal and ethical aspects of evidenced-based care will be introduced. This is an introductory course of normal growth and development from birth to the older adult. A holistic approach will be utilized encouraging the student to assess the client's physical, cultural, developmental, and psychosocial aspects of care. (Prerequisite: BIOL 152 and CNA, EMT, or Paramedic license)

ADN 167 S
Clinical I (0-3) 1 Credit
This course introduces the healthcare setting. The student will complete clinical practice in an approved medical facility, and additional simulation and dosage calculation experiences. During the course the student is provided with clinical practice in providing basic nursing care for medical clients. The student will assess, plan, implement and evaluate nursing care. Legal documentation of care will be emphasized. The student will be given opportunity to develop skill in basic nursing procedures. A course fee will apply. (Prerequisite: BIOL 152 and admission to ADN program)

ADN 169 S
Nursing Interventions I (3-1) 3 Credits
The focus of this course is acquisition of knowledge and skills to provide basic nursing care. Nursing procedures will be introduced during the lab component of this course. Emphasis will be on system-specific assessments. Application of principles of critical thinking and problem-solving skills will be practiced in simulation. Medical terminology and professional communication will be emphasized through documentation of assessments and procedures. A course fee will apply. (Prerequisite: BIOL 152 and Admission to ADN program)

ADN 170 F
Nursing Interventions II (4-1) 4 Credits
This course applies the principles and skills related to advanced assessment in evaluating normal client health states. Incorporation of lab and diagnostic values will be emphasized. Initial interventions related to nursing care of clients will be included. Incorporation of support systems in client care will be stressed. Continued development of nursing skills will be emphasized throughout the lab component of this course. This course includes didactic and skills labs and simulations. A course fee will apply. (Prerequisite: BIOL 252 and ADN 169)

ADN 172 F
Family Development (2-0) 2 Credits
This course provides the principles of family-centered, maternal-newborn nursing. The course focuses on the physical, cultural, spiritual, and psychosocial needs of the pregnant woman, her family, and the newborn. Assessment and health promotion of the well child will be incorporated. (Prerequisite: ADN 163 & ADN 169)

ADN 175 S
Dosage Calculation I (1-0) 1 Credit
This course will provide introduction to basic dosage calculations. Emphasis will be placed on developing and expanding math skills as they relate to administering medications and dosage related medical terminology. (Prerequisite: Admission to ADN program)

ADN 176 ***F***
Dosage Calculation II (1-0) 1 Credit
This course will build on basic dosage calculations learned in Dosage Calculation I. Emphasis will be placed on calculation related to preparation of solutions, weight-based dosages, parenteral medications, enteral and intravenous infusions. (Prerequisite: ADN 175 or Instructor Approval)

ADN 177 ***F***
Clinical II (0-12) 3 Credits
This course provides clinical practice in basic nursing skills in addition to dosage calculation, and simulation experiences. The student will be encouraged to apply growth and development principles in assessing, planning, intervening, and evaluating nursing care. Emphasis will be on therapeutic communication and legal documentation. A course fee will apply. (Prerequisites: ADN 167)

ADN 200 ***F***
Transition (LPN's only) (2-0) 2 Credits
This is a specially designed course for licensed practical nurses entering into professional nursing. This course provides essential concepts, skills, and simulations to facilitate the assimilation of knowledge and incorporation of the professional nursing role. (Prerequisite: Student must be an LPN and admitted to the ADN program, BIOL 220 and BIOL 252)

ADN 260 ***S***
Nursing Interventions III (4-0) 4 Credits
This course utilizes a nursing framework to plan care for the clients with altered health states throughout the life cycle. Nutritional and pharmacological aspects of care will be included. Methods of evaluating care based on expected outcomes will be emphasized. A course fee will apply. (Prerequisite: ADN 170 or ADN 200 and BIOL 220; Co-requisite: MATH 125, MATH 130, or MATH 135)

ADN 263 ***S***
Nursing Concepts II (2-0) 2 Credits
This course incorporates theories in leadership and management. Topics introduced in Nursing Concepts I will be further developed such as legalities and ethics. Collaboration with the management team and other health professionals, delegation, prioritization, quality improvement, time management, and professional communication will be explored. Conflict management and assertiveness training will be included. (Prerequisite: ADN 163)

ADN 267 ***S***
Clinical III (0-12) 3 Credits
This course provides clinical experiences in addition to simulation in promoting accountability, responsibility, and communication within the health care team. Dosage calculation opportunities may be provided. The student will be given the opportunity to master nursing skills in a variety of settings. A course fee will apply. (Prerequisites: ADN 177 or ADN 200)

ADN 268
Pathophysiology (3-0) 3 Credits
This course utilizes principles of adult learning and a nursing framework to relate pathophysiologic concepts to nursing care. Disease processes are discussed in terms of nursing problems. (Prerequisite: BIOL 152)

ADN 272 ***F***
Psychosocial Nursing (2-0) 2 Credits
This course utilizes the nursing process to develop a safe plan of care for individuals with problems related to coping and adaptation throughout the life cycle. Emphasis will be on helping the student become more sensitive to human behavior and the therapeutic use of self. Pharmacological and nutritional aspects of care will be included. (Prerequisite: PSYC 101 or SOC 101, ADN 260, ADN 263, & ADN 267)

ADN 277 ***F***
Clinical IV (0-12) 3 Credits
This course provides clinical experiences and simulation in promoting accountability, responsibility, and communication within the health care team. Dosage calculation opportunities may be provided. The student will be given the opportunity to master nursing skills in a variety of settings. Evidenced-based nursing care will be emphasized. A course fee will apply. (Prerequisite: ADN 267)

ADN 279 ***F***
Nursing Interventions IV (3-0) 3 Credits
This course builds on the concepts introduced in Nursing Interventions III for the care of the adult medical-surgical clients with multi-system alteration. Advanced nursing skills in specialty units will be emphasized. A course fee will apply. (Prerequisite: ADN 260)

ADN 280 ***SU***
Advanced Pharmacology (3-0) 3 Credits
The advanced Pharmacology course offers an in-depth discussion of current medications being utilized with an emphasis on nursing responsibility in administering and monitoring them. 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. Nursing considerations will be presented through the nursing process including nutrition, supportive care and patient teaching with application through the life span. (Prerequisites: Admission to the ADN Program or completion of an accredited licensed practical nursing program, or a Registered nurse or by permission of the instructor)

ADN 281 ***S***
Dosage Calculation III (1-0) 1 Credit
This course will provide and build on basic dosage calculations learned in Dosage Calculation I & II with emphasis on blood modifying, OB titrations, and metabolic dosage calculations.

ADN 282 ***F***
Dosage Calculation IV (1-0) 1 Credit
This course will build on basic dosage calculations learned in Dosage Calculations I, II, and III with emphasis on developing and expanding critical dosage calculations as related to the Critical Care Setting.

OCCUPATIONAL THERAPY ASSISTANT
(Offered only at Webb City)

OTA 101 ***S***
Principles of Occupational Therapy (2-0) 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 and OTA 116)

OTA 111 ***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 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 131 F
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; Co-requisites: OTA 140 and OTA 201)

OTA 140 F
Occupational Therapy Trends and Issues (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; development of values, attitudes, and behaviors congruent with Occupational Therapy (OT) standards and ethics; the role of the Occupational Therapy Assistant (OTA) in OT, research publication, and program evaluation; supervisory requirements; certification and licensure; reimbursement issues; personnel training and supervision; continued learning; and promotion of the OT profession; and job search skills. A course fee will apply. (Prerequisite: OTA 111; Co-requisites: OTA 131 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 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 236 S
Occupational Performance Issues in Later Adulthood (2-2) 3 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 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 110 F
Critical Thinking (3-0) 3 Credits
This course teaches the art of critical thinking and informal logic in examining the messages in all kinds of discourse: media, politics, values conflicts, and personal conversation. It teaches the ability to evaluate and manage claims for truth, and how to effectively engage others in positive and productive argumentation. The course examines theories of ethics and values, and methods of discourse with others regarding issues in ethics and values. Students successfully completing this course may apply the hours to partial fulfillment of the general education requirement in either Humanities or Social Sciences but not both simultaneously. (Prerequisite: Reading at least at 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. Students successfully completing this course may apply the hours to partial fulfillment of the general education requirement in either Humanities or Social Sciences but not both simultaneously.

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 partially fulfill Humanities general education requirements. (Prerequisite: Reading at least at college level)

PHIL 202
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 courses meet physical education activity graduation requirements.

PE 103 F,S
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 104
Rhythmic Aerobics (0-2) 1 Credit
This general fitness class is designed to guide each student toward physical fitness and weight control through group exercise to music. (Note: prerequisite for PE 204 is PE 104; these courses should be taken in sequence) (Course location varies)

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 F
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 S
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
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 118 Upon Request
Introduction to Fly Fishing (0-2) 1 Credit
An introduction to fly fishing includes instruction in ways to preserve fish habitat and a basic introduction to the sport of fly fishing. Students' introduction to the sport will include: knowledge of equipment, fish identification, knot-tying, casting mechanics, fishing techniques, reading still and moving water, basic entomology and ecology, and environmental preservation and restoration projects. No previous fly fishing or conventional tackle fishing experience is needed for the course. This introductory course is intended to provide the novice angler with the fundamental skills and knowledge needed to enter the sport of fly fishing.

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 204
Advanced Rhythmic Aerobics (0-2) 1 Credit
This general fitness class is designed to guide each student toward physical fitness and weight control through group exercise to music. (Prerequisite: PE 104. PE 104 and 204 should be taken in sequence) (Course location varies)

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 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)

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The following lecture courses will not meet PE activity graduation requirements.

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 SDL, 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) (Women) 1 Credit
This class is designed for varsity participation and preparation in basketball, soccer, baseball, and softball. 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 SDL, 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,SU
Survey of Physical Science (4-2) 5 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 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,SU
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. Successful completion of PLSC 103 fulfills the State of Missouri constitution requirements and partially fulfills 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. (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)

PLSC 201 Upon Request
Contemporary Political Activities of the U.S. (1-2) 2 Credits
This course follows the most important problems, activities and functions of the United States government with emphasis on the political nature of the matter under consideration. (Prerequisite: Reading at least at college level)

PLSC 205 Upon Request
Introduction to Political Science (3-0) 3 Credits
This course offers an introduction to the principles and problems related to the study of government and politics in today's world. The course provides students with a framework for the study of politics and introduces students to the various political science sub-fields including: comparative politics, international relations, political economy, and political philosophy. This course partially fulfills the Social and Behavioral Science General Education requirements for the Associate of Arts degree. (Prerequisite: PLSC 103, 104 or equivalent, or permission of the instructor)

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 210 S
Child Psychology (3-0) 3 Credits
This study of the origin and development of intellectual, emotional and physical growth of children from birth to adolescence emphasizes problems of child rearing, education and social action. Successful completion of this course partially fulfills Social and Behavioral Science general education requirements. (Prerequisite: PSYC 101 and Reading at least at college level)

PSYC 211 F,S
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 215 F
Adolescent Psychology (3-0) 3 Credits
Psychological principles for understanding of adolescent behavior are presented. Students study intellectual, emotional and physical growth from puberty to adulthood. Successful completion of this course partially fulfills Social and Behavioral Science general education requirements. (Prerequisite: PSYC 101 and Reading at least at college level)

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 230)

SOCIAL WORK

SWK 200 F,S
Introduction to Social Work (3-0) 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 219 F,S
Human Diversity (3-0) 3 Credits
The purpose of this course is to provide a basis of understanding of human diversity in the United States and its implications for social work practice. Students are expected to develop sensitivity toward the unique status of, and special issues faced by, population groups that have experienced discrimination and oppression due to race, ethnicity, gender, age, sex, disability, or spiritual beliefs. Students will acquire a beginning understanding of culturally specific issues that are important to the ongoing development of cultural sensitivity and to the development of practice skills in working with diverse groups, and advocating for social justice.

SWK 221 S
Basic Helping Skills (3-0) 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 F
Substance Abuse Interventions (3-0) 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 F,S,SU
General Sociology (3-0) 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.

SOC 103 F,S
Marriage and the Family (3-0) 3 Credits
This course focuses on a cross-cultural comparative analysis of marriage practices and family structures. Emphasis is placed on the role and scope of the family in contemporary American society. Successful completion of this course partially fulfills Social and Behavioral Science general education requirements. (Prerequisite: Reading at least at college level)

SPEECH

COMM 104 F,S,SU
Fundamentals of Speech (3-0) 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 F
Acting I (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 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 F,S,SU
Theatre Practicum, Performance (1-0) 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 F
Playwriting (3-0) 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 S
Directing I (3-0) 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 S
Stagecraft (3-0) 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 F,S,SU
Theatre Practicum, Technical (0-3) 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 SU
Summer Theatre (3-0) 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 F
Stage Makeup (3-0) 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 F,S,SU
Introduction to Theatre (3-0) 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
Scenework (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.

TRANSPORT TRAINING

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 S
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 135 F
Basic Metallurgy (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. A course fee will apply.

WELD 140 S
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 145 F,S
Gas Metal Arc Welding-GMAW (2-2)
3 Credits
This course is designed to provide the concepts, procedures, and operational hands-on practice necessary to perform gas metal arc welding (GMAW), formerly known as Metal Inert Gas (MIG) welding. Fee for materials and supplies. A course fee will apply. (Prerequisite: WELD 113 or Permission of Instructor)

WELD 150 F,S
Gas Tungsten Arc Welding-GTAW (2-2)
3 Credits
This course is designed to provide the concepts, procedures, and operational hands-on practice necessary to perform gas tungsten arc welding (GTAW), formerly known as Tungsten Inert Gas (TIG) welding. Fee for materials and supplies. A course fee will apply. (Prerequisite: WELD 113 or Permission of Instructor)

WELD 151 F
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
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 F
Welding Lab I (0-10) 5 Credits
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 F
Welding Lab II (0-10) 5 Credits
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 155 F,S
Shielded Metal Arc Welding-SMAW (2-2)
3 Credits
This course is designed to provide the concepts, procedures, and operational hands-on practice necessary to perform shielded metal arc welding (SMAW), formerly known as "Stick" welding or traditional ARC welding. Fee for materials and supplies. A course fee will apply. (Prerequisite: WELD 113 or Permission of Instructor)

WELD 197,198, 199, 297, 298, 299
Topics in Welding 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 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 S
Welding Theory III (2-1) 2 Credits
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 ***S***
Welding Lab III (0-14) ***7 Credits***
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 ***S***
Welding Lab V Fabrication (0-8)
4 Credits
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 ***S***
Welding Lab IV Pipe/Plate (0-8)
4 Credits
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)

ASSOCIATE OF APPLIED SCIENCE DEGREE

Accounting 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 pursing 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*	
Missouri Constitution		***3 hours***
HIST 106*		
PLSC 103*, 104*		
Business Core		***10 hours***
BSAD 103 (2)		
BSAD 125 (3)		
BSAD 130* (3)		
ACCT 290 (2)		
Accounting Core		***33 hours***
	BSAD 150 (3) ***OR***	
ACCT 160 (3)	BMGT 175 (3)	
ACCT 165* (3)	BSAD 218* (3)	
ACCT 201 (3)	BSAD 230 (3)	
ACCT 202* (3)	ECON 201* (3)	
ACCT 245 (3)	ECON 202* (3)	
ACCT 250* (3)		
Electives		***3 hours***
Electives can be taken from ACCT, BSAD, BMGT, or OA		

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	Spreadsheets (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 Economics I	3
HIST	106	– OR – PLSC 103, 104	3
Approved Business Elective			3
		TOTAL	**15**

Spring Semester			***Hours***
ACCT	160	Payroll Accounting (Spring only)	3
ACCT	250	Certified Bookkeeper Rev	3
ACCT	290	Accounting Internship	2
BSAD	103	Professional Development	2
BSAD	230	Business Law	3
ECON	202	Principles of Economics II	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.

ASSOCIATE OF APPLIED SCIENCE DEGREE

Administrative Assistant AAS

This program is designed to prepare students for office support positions. Office support personnel are needed in virtually every type of business and are essential in helping offices run effectively and efficiently. Crowder's Associate of Applied Science in Administrative Assistant degree will give you the opportunity to develop expert skills in keyboarding, software applications, transcription, business communications, and office management. Students will be able to utilize innovative technology to enhance and improve office procedures, in addition, students will develop the interpersonal, decision making and analytical skills required in dealing with workplace problems and situations. Through Crowder's comprehensive Internship program, you will have the opportunity to gain valuable work experience in a business office setting ensuring that you gain the valuable skills and connections you'll need to succeed in today's job market.

*All students pursing this degree must take and pass the approved Technical Skills Assessment (TSA) prior to graduating. A fee will be charged for this test.

Program of Study

Orientation					***1 hour***
COLL	101				
Communications					***9 hours***
Written Communications (6 hours)					
ENGL	101*				
ENGL	102*	***OR***	ENGL	104*	
ENGL	203*				
Oral Communications (3 hours)					
COMM	104*				
Mathematics					***3 hours***
BSAD	121*				
Missouri Constitution					***3 hours***
HIST	106*				
PLSC	103*, 104*				
Business Core					***13 hours***
BMGT	223 (3)		BSAD	130* (3)	
BSAD	103 (2)		OA	231 (2)	
BSAD	125 (3)				
Administrative Assistant Core					***30 hours***
ACCT	101 (3)	***OR***	ACCT	201 (3)	
ACCT	165* (3)				
BSAD	108 (3)				
BSAD	218* (3)				
BSAD	219* (3)				
OA	102 (3)				
OA	107 (3)				
OA	115 (3)				
OA	200* (3)				
OA	211 (3)				
Electives					***3 hours***
Electives can be taken from ACCT, BSAD, BMGT, OA, or ECON					

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
BSAD	121	Business Math	3
COLL	101	College Orientation	1
COMM	104	Fundamentals of Speech	3
ENGL	101	Composition	3
OA	107	College Keyboarding (Fall only)	3
OA	115	Customer Service	3
		TOTAL	**16**

Spring Semester			***Hours***
ACCT	101	Pract Acctg – OR – ACCT 201	3
BSAD	125	Computer Applications	3
ENGL	102	– OR – 203	3
HIST	106	US History – OR – PLSC 103,104	3
OA	102	Filing Sys & Recs Mgmt (Spring only)	3
		TOTAL	**15**

SECOND YEAR

Fall Semester			***Hours***
ACCT	165	QuickBooks	3
BMGT	223	Business Ethics (Fall only)	3
BSAD	130	Business Communications	3
BSAD	219	Database Management (Fall only)	3
OA	200	Word Processing (Fall only)	3
		TOTAL	**15**

Spring Semester			***Hours***
BSAD	103	Professional Development	2
BSAD	108	Personal Finance	3
BSAD	218	Spreadsheets (Spring only)	3
OA	211	Secretarial Off Proc (Spring only)	3
OA	231	Office Administration Internship	2
Approved Business Elective			3
		TOTAL	**16**

TOTAL HOURS REQUIRED 62

*Prerequisite requirement

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.

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.

Program of Study

Certificate Core Courses			***25 hours***
AMT	102	Introduction to Industrial Electricity (3)	
AMT	104*	Electrical Motor Controls (3)	
AMT	132	Industrial Hydraulics (3)	
AMT	182*	Introduction to Automated Robotics (3)	
AMT	204*	Programmable Logic Controllers I (3)	
AMT	206*	Programmable Logic Controllers II (3)	
AMT	284*	Automated Robotic Programming (3)	
CNS	101	Introduction to Electronics (3)	
COLL	101	College Orientation (1)	
Mathematics			***3 hours***
MATH	104*	(3)	
MATH	135*	(3)	
Communications			***9 hours***
Written Communications (6 hours)			
ENGL	101*	(3)	
ENGL	102*	(3) – OR – ENGL 104*	
ENGL	203*	(3)	
Oral Communications (3 hours)			
COMM	104*	(3)	
Missouri Constitution			***3 hours***
PLSC	103*	(3)	
HIST	106*	(3)	
Support Courses			***10-11 hours***
BSAD	103	(2)	
BSAD	115	(3) – OR – BSAD 125	
DRFT	101	(3)	
WELD	113	(3) – OR – WELD 151*	
Advanced Manufacturing Courses			***7 hours***
AMT	111	Introduction to Industrial Safety (1)	
AMT	142*	Manufacturing Mechanics (3)	
AMT	290*	Manufacturing Internship (3)	
Automation/Robotics Courses			***3 hours***
CNS	115	Cisco Networking I (3)	

*Prerequisite requirement

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
AMT	102	Intro to Industrial Electricity	3
AMT	104	Electrical Motor Control	3
AMT	132	Industrial Hydraulics	3
CNS	101	Intro to Electronics	3
COLL	101	College Orientation	1
Approved Mathematics Course			3
		TOTAL	**16**

Spring Semester			***Hours***
AMT	111	Introduction to Industrial Safety	1
AMT	182	Intro to Automated Robotics	3
AMT	204	Programmable Logic Controllers I	3
AMT	206	Programmable Logic Controllers II	3
AMT	284	Automated Robotic Programming	3
Approved Written Communications Course			3
		TOTAL	**16**

Graduate with Automation/Robotics Certificate

SECOND YEAR

Fall Semester			***Hours***
BSAD	103	Professional Development	2
BSAD	115	Comp Apps – OR – BSAD 125	3
CNS	115	Cisco Networking I	3
COMM	104	Fundamentals of Speech	3
WELD	113	Introduction to Welding	3
Approved Written Communications Course			3
		TOTAL	**17**

Spring Semester			***Hours***
AMT	142	Manufacturing Mechanics	3
AMT	290	AMT Internship	3
DRFT	101	Intro to Engineering Drawing	3
HIST	106	US History – OR – PLSC 103	3
		TOTAL	**12**

Graduate with AAS

Total CERTIFICATE Hours Required	**28**
Additional Hours Needed for AAS	**33**
Total AAS Hours Required	**61**

Courses for Certificate	
Additional Courses for AAS Degree	

CERTIFICATE TO AAS

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			***11 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	101	College Orientation (1)	
Certificate Support Courses			***8-9 hours***
BSAD	115	Computer Concepts (3) – OR – BSAD 125	
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			
AMT	122	Basic Machining (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	145*	GMAW Welding (3) – OR – WELD 152*	
WELD	150*	GTAW Welding (3) – OR – WELD 153*	
WELD	155*	SMAW Welding (3) – OR – WELD 154*	
Communications			***9 hours***
Written Communications (6 hours)			
ENGL	101* (3)	ENGL 102* (3)– OR – ENGL 104*	
ENGL	203* (3)		
Oral Communications (3 hours)			
COMM	104* (3)		
Mathematics			***3 hours***
MATH	104* (3)	MATH 135* (3)	
Missouri Constitution			***3 hours***
PLSC	103* (3)	HIST 106* (3)	
Support Courses			***2 hours***
BSAD	103 (2)		
Advanced Manufacturing Courses			***6 hours***
AMT	132*	Industrial Hydraulics (3)	
AMT	290*	Manufacturing Internship (3)	
Manufacturing Maintenance Courses			***6 hours***
Specialty Electives (6 hours)			
AMT	162*	Industrial Process Control I (3)	
DEPT	XXX	Any Technology or Business Div Course (3)	

*Prerequisite requirement

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	132	Industrial Hydraulics	3
COLL	101	College Orientation	1
WELD	113	Introduction to Welding	3
		TOTAL	**14**

Spring Semester			***Hours***
AMT	122	Basic Mach – OR – Approved Elective	3
AMT	204	PLC I	3
BSAD	115	Comp Concepts – OR – BSAD 125	3
DRFT	101	Intro to Engineering Drawing	3
Approved Elective			3
		TOTAL	**15**

Graduate with Industrial Maintenance Tech Certificate

SECOND YEAR

Fall Semester			***Hours***
BSAD	103	Professional Development	2
COMM	104	Fundamentals of Speech	3
CONS	131	Plumbing (Fall only)	3
Approved Mathematics Course			3
Approved Written Communications Course			3
		TOTAL	**14**

Spring Semester			***Hours***
AMT	142	Manufacturing Mechanics	3
AMT	290	AMT Internship	3
CONS	155	Basic HVAC (Spring only)	3
HIST	106	US History – OR – PLSC 103	3
Approved Elective			3
Approved Written Communications Course			3
		TOTAL	**18**

Graduate with AMT: Manufacturing Maintenance AAS

Total CERTIFICATE Hours Required	**26**
Additional Hours Needed for AAS	**35**
Total AAS Hours Required	**61**

Courses for Certificate	
Additional Courses for AAS Degree	

CERTIFICATE

Advanced Manufacturing Technology: Programmable Logic Controller (PLC) Technician Certificate

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

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 (PLC) I (3)	
AMT	206*	Programmable Logic Controllers (PLC) II (3)	

*Prerequisite requirement

Suggested Plan of Study

Fall Semester			***Hours***
AMT	102	Introduction to Industrial Electricity	3
AMT	104	Electrical Motor Controls	3
AMT	111	Introduction to Industrial Safety	1
		TOTAL	**7**

Spring Semester			***Hours***
AMT	142	Manufacturing Mechanics	3
AMT	204	Programmable Logic Controllers I	3
AMT	206	Programmable Logic Controllers II	3
		TOTAL	**9**

ASSOCIATE OF APPLIED SCIENCE DEGREE

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*			
Missouri Constitution				***3 hours***
HIST	106*			
PLSC	103*, 104*			
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*			

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
PLSC	103	– OR – HIST 106	3
		TOTAL	**16**

Spring Semester			***Hours***
HORT	113	Greenhouse Management	3
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
		TOTAL	**18**

TOTAL HOURS REQUIRED 63

*Prerequisite requirement

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: Horticulture Option AAS

This program offers the graduate an Associate of Applied Science degree (AAS) which provides education for specific careers in agricultural business, horticulture. 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*			
Missouri Constitution				***3 hours***
PLSC	103*, 104*			
HIST	106*			
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 Horticulture Option				***18 hours***
HORT	101		HORT	204
HORT	103		AGRN	243*
HORT	113		AGRI	123

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
AGRI	111	Ag Career Orientation	1
AGRN	113	Crop Science	3
HORT	103	Floriculture	3
MATH	125	Quantitative Reasoning	3
Approved Written Communications Course			3
		TOTAL	**13**

Spring Semester			***Hours***
AGEC	123	Principles of Ag Economics	3
AGRN	243	Forage Crops	3
ANSC	114	Animal Science	4
HORT	113	Greenhouse Management	3
Approved Written Communications Course			3
		TOTAL	**16**

SECOND YEAR

Fall Semester			***Hours***
AGEC	213	Farm Business Management	3
AGEC	223	Agriculture Computer Apps	3
AGMC	205	Ag Mechanics	3
AGRN	214	Fundamentals of Soil Science	4
HORT	101	General Horticulture	3
		TOTAL	**16**

Spring Semester			***Hours***
AGRI	123	Agriculture Chemicals	3
AGRI	202	Ag Capstone	2
AGRI	212	& AGRI 222 – OR – AGRI 204	2-4
COMM	104	Fundamentals of Speech	3
HORT	204	Nursery Mgmt/Landscape & Des	3
PLSC	103	– OR – HIST 106	3
		TOTAL	**16-18**

TOTAL HOURS REQUIRED 61-63

*Prerequisite requirement

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 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*			
Missouri Constitution				***3 hours***
HIST	106*			
PLSC	103*, 104*			
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*		AGRN	243*
ANSC	114			
Agri-Business Livestock Option				***18 hours***
AGRN	243*		ANSC	213
ANSC	153*		ANSC	232*
ANSC	203		ANSC	233

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
PLSC	103	– OR – HIST 106	3
		TOTAL	**16-18**

TOTAL HOURS REQUIRED 61-63

*Prerequisite requirement

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 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*			
Missouri Constitution				***3 hours***
HIST	106*			
PLSC	103*, 104*			
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 Marktng & Mgmt				***Select 18 hours***
AGRI	190*		BMGT	223
AGRI	223		BMGT	285*
BMGT	175		BSAD	230
BMGT	200			

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
BSAD	223	Business Ethics	3
PLSC	103	– OR – HIST 106	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

*Prerequisite requirement

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

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 (Recommended) **or**	COLL	101
Communications			***9 hours***
Written Communications (6 hours)			
ENGL	101*		
ENGL	102* **OR**	ENGL	104*
Oral Communications (3 hours)			
COMM	104*		
Humanities			***9 hours***
Fine Arts (3 hours)		***Additional Humanities (3 hours)***	
ART	101	ART	101
MUSC	101	ASL	101, 102*
TA	205	ENGL	109, 120, 125
		FREN	101
Literature (3 hours)		HIST	101*
ENGL	109, 120, 125	MUSC	101
		PHIL	101*, 110*, 121, 201*, 202*
		SPAN	101
		SWK	219
		TA	205
Mathematics			***3 hours***
MATH	130*		
Physical Education			***2 hours***
PE	113	***OR two of the following:***	
		PE	102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*
Science			***10 hours***
Biological Science (5 hours)		***Physical Science (5 hours)***	
BIOL	101	CHEM	101, 104, 111*
Social and Behavioral Science			***9 hours***
Missouri Constitution (3 hours)		***Additional 3 Hours***	
HIST	106*	ECON	201*, 202*
PLSC	103*, 104*	GEOG	111
And 3 Hours		HIST	101*, 102*, 106*, 107*
AGEC	123 (Ag majors only)	PHIL	110*, 121
		PLSC	103*, 104*, 205*
		PSYC	101, 210*, 215*
		SOC	101
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

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
AGRI	111	Ag Career Development	1
AGRN	113	Crop Science	3
BIOL	101	General Biology	5
COMM	104	Fundamentals of Speech	3
ENGL	101	English Composition I	3
		TOTAL	**15**

Spring Semester			***Hours***
AGEC	223	Ag Computer Applications	3
ANSC	114	Animal Science	4
ENGL	102	English Composition II	3
MATH	130	Elementary Statistics	3
Approved Fine Arts Course			3
		TOTAL	**16**

SECOND YEAR

Fall Semester			***Hours***
AGRN	214	Fundamentals of Soil Science	4
CHEM	101/104/111 Chemistry Course		5
Approved Literature Course – OR – Ag Elective			3
Approved Soc & Behavioral Science Course			3
		TOTAL	**15**

Spring Semester			**Hours**
AGEC	123	Principles of Ag Economics	3
HIST	106	– OR – PLSC 103, 104	3
PE	113	Lifetime Fitness and Wellness	2
Approved Humanities Course			3
Approved Ag Elective – OR – Literature Course			3
		TOTAL	**14**

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.

ASSOCIATE OF ARTS DEGREE

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 (Recommended) **or**		COLL	101
Communications				***9 hours***
Written Communications (6 hours)				
ENGL	101*			
ENGL	102*	**OR**	ENGL	104*
Oral Communications (3 hours)				
COMM	104*			
Humanities				***9 hours***
Fine Arts (3 hours)			***Additional Humanities (3 hours)***	
ART	101		ART	101
MUSC	101		ASL	101, 102*
TA	205		ENGL	109, 120, 125
			FREN	101
Literature (3 hours)			HIST	101*
ENGL	109, 120, 125		MUSC	101
			PHIL	101*, 110*, 121, 201*, 202*
			SPAN	101
			SWK	219
			TA	205
Mathematics				***3 hours***
MATH	135*			
Physical Education				***2 hours***
PE	113		***OR two of the following:***	
			PE	102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*
Science				***10 hours***
Biological Science (5 hours)			***Physical Science (5 hours)***	
BIOL	101		CHEM	101, 104, 111*
Social and Behavioral Science				***9 hours***
Missouri Constitution (3 hours)			***Additional 3 Hours***	
HIST	106*		PSYC	101
PLSC	103*, 104*			
And 3 Hours				
HIST	107			
Major Courses				***24 hours***
Required Courses (14 hours)				
AGRN	113		EDUC	150
AGRN	214*		EDUC	231
AGMC	205		EDUC	251
ANSC	114		HORT	113

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
BIOL	101	General Biology	5
PSYC	101	General Psychology	3
EDUC	150	Intro to Teacher Ed	1
		TOTAL	**17**

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
PE	113	Lifetime Fitness and Wellness	2
		TOTAL	**17**

SECOND YEAR

Fall Semester			***Hours***
AGMC	205	Agriculture Mechanics	3
AGRN	214	Fundamentals of Soil Science	4
CHEM	101	– OR – CHEM 104 – OR – 111	5
EDUC	231	Educational Psychology	3
PLSC	103	– OR – PLSC 104	3
		TOTAL	**18**

Spring Semester			**Hours**
HORT	113	Greenhouse Management	3
EDUC	251	Teaching Prof w/Field Exp.	3
Approved Fine Arts Course			3
Approved Humanities Elective			3
Approved Literature Course			3
		TOTAL	**15**

TOTAL HOURS REQUIRED 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.

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 (Recommended) **or**	COLL	101
Communications			***9 hours***
Written Communications (6 hours)			
ENGL	101*		
ENGL	102* **OR**	ENGL	104*
Oral Communications (3 hours)			
COMM	104*		
Humanities			***9 hours***
Fine Arts (3 hours)		***Additional Humanities (3 hours)***	
ART	101	ART	101
MUSC	101	ASL	101, 102*
TA	205	ENGL	109, 120, 125
		FREN	101
Literature (3 hours)		HIST	101*
ENGL	109, 120, 125	MUSC	101
		PHIL	101*, 110*, 121, 201*, 202*
		SPAN	101
		SWK	219
		TA	205
Mathematics			***3 hours***
MATH	135*		
Physical Education			***2 hours***
PE	113	***OR two of the following:***	
		PE	102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*
Science			***10 hours***
Biological Science (5 hours)		***Physical Science (5 hours)***	
BIOL	101	CHEM	101, 104, 111*
Social and Behavioral Science			***9 hours***
Missouri Constitution (3 hours)		***Additional 3 Hours***	
HIST	106*	ECON	201*, 202*
PLSC	103*, 104*	GEOG	111
And 3 Hours		HIST	101*, 102*, 106*, 107*
AGEC	123 (Ag majors only)	PHIL	110*, 121
		PLSC	103*, 104*, 205*
		PSYC	101, 210*, 215*
		SOC	101
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		

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
PE	113	Lifetime Wellness	2
		TOTAL	**15**

Spring Semester			***Hours***
AGEC	223	Ag Computer Applications	3
ANSC	114	Animal Science	4
BIOL	101	General Biology	5
ENGL	102	English Composition II	3
		TOTAL	**15**

SECOND YEAR

Fall Semester			***Hours***
AGRN	214	Fundamentals of Soil Science	4
CHEM	101/104/111	Chemistry Course	5
HIST	106	– OR – PLSC 103, 104	3
Approved Literature Course/or Ag Elective			3
		TOTAL	**15**

Spring Semester			**Hours**
AGEC	123	Principles of Ag Economics	3
Approved Ag Elective/or Literature Course			3
Approved Fine Arts Course			3
Approved Humanities Course			3
Approved Soc & Behavioral Science Course			3
		TOTAL	**15**

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.

ASSOCIATE OF ARTS DEGREE

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 (Recommended) **or**	COLL	101
Communications			***9 hours***
Written Communications (6 hours)			
ENGL	101*		
ENGL	102* **OR**	ENGL	104*
Oral Communications (3 hours)			
COMM	104*		
Humanities			***9 hours***
Fine Arts (3 hours)		***Additional Humanities (3 hours)***	
ART	101	ART	101
MUSC	101	ASL	101, 102*
TA	205	ENGL	109, 120, 125
		FREN	101
Literature (3 hours)		HIST	101*
ENGL	109, 120, 125	MUSC	101
		PHIL	101*, 110*, 121, 201*, 202*
		SPAN	101
		SWK	219
		TA	205
Mathematics			***3 hours***
MATH	135*		
Physical Education			***2 hours***
PE	113	***OR two of the following:***	
		PE	102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*
Science			***10 hours***
Biological Science (5 hours)		***Physical Science (5 hours)***	
BIOL	101	CHEM	111*
Social and Behavioral Science			***9 hours***
Missouri Constitution (3 hours)		***Additional 3 Hours***	
HIST	106*	ECON	201*, 202*
PLSC	103*, 104*	GEOG	111
And 3 Hours		HIST	101*, 102*, 106*, 107*
AGEC	123 (Ag majors only)	PHIL	110*, 121
		PLSC	103*, 104*, 205*
		PSYC	101, 210*, 215*
		SOC	101
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		

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
		TOTAL	**14**

Spring Semester			***Hours***
AGEC	223	Ag Computer Applications	3
AGRN	113	Crop Science	3
BIOL	101	General Biology	5
ENGL	102	English Composition II	3
PE	113	Lifetime Wellness	2
		TOTAL	**16**

SECOND YEAR

Fall Semester			***Hours***
AGEC	123	Principles of Ag Economics	3
CHEM	111	General Chemistry	5
HIST	106	– OR – PLSC 103, 104	3
Approved Literature Course/or Ag Elective			3-4
		TOTAL	**14-15**

Spring Semester			**Hours**
ANSC	213	Feeds & Nutrition	3
Approved Fine Arts Course			3
Approved Soc & Behavioral Science Course			3
Approved Humanities Course			3
Approved Ag Elective/or Literature Course			3-4
		TOTAL	**15-16**

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.

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 (Recommended) **or**	COLL	101
Communications			***9 hours***
Written Communications (6 hours)			
ENGL	101*		
ENGL	102* **OR**	ENGL	104*
Oral Communications (3 hours)			
COMM	104*		
Humanities			***9 hours***
Fine Arts (3 hours)		***Additional Humanities (3 hours)***	
ART	101	ART	101
MUSC	101	ASL	101, 102*
TA	205	ENGL	109, 120, 125
		FREN	101
Literature (3 hours)		HIST	101*
ENGL	109, 120, 125	MUSC	101
		PHIL	101*, 110*, 121, 201*, 202*
		SPAN	101
		SWK	219
		TA	205
Mathematics			***3 hours***
MATH	135*		
Physical Education			***2 hours***
PE	113	***OR two of the following:***	
		PE	102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*
Science			***10 hours***
Biological Science (5 hours)		***Physical Science (5 hours)***	
BIOL	101	CHEM	111*
Social and Behavioral Science			***9 hours***
Missouri Constitution (3 hours)		***Additional 3 Hours***	
HIST	106*	ECON	201*, 202*
PLSC	103*, 104*	GEOG	111
And 3 Hours		HIST	101*, 102*, 106*, 107*
AGEC	123 (Ag majors only)	PHIL	110*, 121
		PLSC	103*, 104*, 205*
		PSYC	101, 210*, 215*
		SOC	101
Major Courses			***17 hours***
AGEC	223	ANSC	213
AGRN	113	POSC	104
ANSC	114	POSC	105

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
		TOTAL	**14**

Spring Semester			***Hours***
AGEC	223	Ag Computer Applications	3
AGRN	113	Crop Science	3
BIOL	101	General Biology	5
ENGL	102	English Composition II	3
POSC	104	Intro to Careers in Poultry	2
		TOTAL	**16**

SECOND YEAR

Fall Semester			***Hours***
AGEC	123	Principles of Ag Economics	3
CHEM	111	General Chemistry	5
PE	113	Lifetime Wellness	2
POSC	105	Avian Biology	2
Approved Literature Course			3
		TOTAL	**15**

Spring Semester			**Hours**
ANSC	213	Feeds & Nutrition	3
HIST	106	– OR – PLSC 103, 104	3
Approved Soc & Behavioral Science Course			3
Approved Humanities Course			3
Approved Fine Arts			3
		TOTAL	**15**
		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.

Alternative Energy – Solar AA

The Alternative Energy Program – Solar provides engineering and science students with a unique applied foundation in solar technologies and applications. The program emphasizes learning through classroom and applied hands-on labs. The curriculum below is the result of a cooperative agreement between Crowder College and the School of Engineering at the Missouri University of Science and Technology; cooperative programs are available at Missouri State University and Pittsburg State University. Students in the Alternative Energy - Solar program include Alternative Energy, 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.

Program of Study

Orientation			***1 hour***
COLL	101		
Communications			***9 hours***
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*	***OR***	ENGL 104*
Oral Communications (3 hours)			
COMM	104*		
Humanities			***9 hours***
Fine Arts (3 hours)		***Additional Humanities (3 hours)***	
ART	101	ART	101
MUSC	101	ASL	101, 102*
TA	205	ENGL	109, 120, 125
		FREN	101
Literature (3 hours)		HIST	101*
ENGL	109, 120, 125	MUSC	101
		PHIL	101*, 110*, 121, 201*, 202*
		SPAN	101
		SWK	219
		TA	205
Mathematics			***6 hours***
MATH	112* & 135*		
Physical Education			***2 hours***
PE	113	***OR two of the following:***	
		PE	102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*,205*, 216*, 244*, 245*
Science			***10 hours***
Biological Science (5 hours)		***Physical Science (5 hours)***	
BIOL	101	CHEM	101, 111* (5)
		PHYS	101 (5)
		PHYS	190* (5)
Social and Behavioral Science			***9 hours***
Missouri Constitution (3 hours)		***Add'l Social Sciences (3 hours)***	
HIST	106*	ECON	202*
PLSC	103*, 104*		
Additional (3 hours)			
ECON	201*	PLSC	103*, 104*, 205*
GEOG	111	PSYC	101, 210*, 215*
HIST	101*, 102*, 106*, 107*	SOC	101, 103*
PHIL	110*, 121		
Major Courses			***21 hours***
AMT	112 (3)	ENER	210 (5)
ENER	105 (3)	ENER	220 (5)
ENER	200 (5)		

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
BIOL	101	Biology	5
COLL	101	College Orientation	1
ENER	105	Introduction to Energy	3
ENGL	101	English Composition	3
MATH	135	Algebra for Calculus	3
PLSC	103	Nat'l, State, Local Gov't	3
		TOTAL	**18**

Spring Semester			***Hours***
AMT	112	Occupational Safety	3
ENER	210	Solar Thermal Systems	5
ENGL	102	Advanced English Comp	3
MATH	112	Trigonometry	3
Approved Physical Education Course			2
		TOTAL	**16**

SECOND YEAR

Fall Semester			***Hours***
COMM	104	Fundamentals of Speech	3
ENER	200	Passive Solar Systems	5
Approved Fine Arts Course			3
Approved Physical Science Course			5
		TOTAL	**16**

Spring Semester			**Hours**
ECON	202	Principles of Econ II	3
ENER	220	Solar Electric Systems	5
Approved Humanities Course			3
Approved Literature Course			3
Approved Soc & Behavioral Science Course			3
		TOTAL	**17**

TOTAL HOURS REQUIRED 67

*Prerequisite required

Students interested in enrolling in alternative energy classes should be advised through the MARET Center. For additional information, please contact 417-455-5422.

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.

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					***23 hours***
AMT	112	Occupational Safety (3)			
COLL	101	College Orientation (1)			
CONS	131	Plumbing (3)			
CONS	141*	Electrical (3)			
ENER	105	Intro to Energy (3)			
ENER	210*	Solar Thermal Systems (5)			
ENER	220*	Solar Electric Systems (5)			
Communications					***9 hours***
Written Communications (6 hours)					
ENGL	101*				
ENGL	102*	***OR***	ENGL	104*	
ENGL	203*				
Oral Communications (3 hours)					
COMM	104*				
Mathematics					***3 hours***
MATH	104*	(3)			
MATH	125*	(3)			
MATH	135*	(3)			
Science					***5 hours***
PHYS	101	(5)			
Missouri Constitution					***3 hours***
HIST	106*				
PLSC	103*, 104*				
Required Courses					***16 hours***
BSAD	103	(2)			
CNS	101	(3)	DRFT	101	(3)
CONS	105	(3)	ENER	200*	(5)
Approved Electives					***5 hours***
AMT	102	(3)	DRFT	103	(3)
CONS	243*	(3)	ENER	142	(4)
CONS	245	(3)	ENER	256, 257, 258 Projects (1-3)	

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
AMT	112	Occupational Safety	3
COLL	101	College Orientation	1
CONS	131	Plumbing	3
CONS	141	Electrical	3
ENER	105	Introduction to Energy	3
		TOTAL	**13**

Spring Semester			***Hours***
ENER	210	Solar Thermal Systems	5
ENER	220	Solar Electric Systems	5
Approved Mathematics Course			3
Approved Elective			2
		TOTAL	**15**

Graduate with Active Solar Technician Certificate

Fall Semester			***Hours***
CNS	101	Introduction to Electronics	3
COMM	104	Fundamentals of Speech	3
CONS	105	Introduction to Construction	3
ENER	200	Passive Solar Systems	5
		TOTAL	**14**

Spring Semester			***Hours***
BSAD	103	Professional Development	2
DRFT	101	Intro to Engineering Drawing	3
PHYS	101	Survey of Physics	5
Approved Elective			3
Approved Written Communications Course			3
		TOTAL	**16**

THIRD YEAR

Fall Semester			***Hours***
PLSC	103	– OR – HIST 106	3
Approved Written Communications Course			3
		TOTAL	**6**

Graduate with Solar AAS

Total CERTIFICATE Hours Required	**23**
Additional Hours Needed for AAS	**41**
Total AAS Hours Required	**64**

Students interested in enrolling in alternative energy classes should be advised through the MARET Center. For additional information, please contact 417-455-5422.

Courses for Certificate	
Additional Courses for AAS Degree	

CERTIFICATE TO AAS

Alternative Energy: Wind Energy Technician Certificate

Alternative Energy – Wind AAS

The Alternative Energy Program AAS Degree provides students with a practical foundation in renewable energy technology. The program's emphasis on vocational wind turbine technology 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 program include engineering, science, and technology majors. Students are required to take a certification exam given as part of the ENER 232 course and report their score to the College for completion of this degree program. Students are strongly encouraged to contact the Wind Instructor for advisement before beginning this program.

The Wind Energy Technician certificate provides students with hands-on learning opportunities. The curriculum is designed to prepare students for entry level employment. Students are required to take a certification exam given as part of the ENER 232 course and report their score to the College for completion of this degree program. Students are strongly encouraged to contact the Wind Instructor for advisement before beginning this program.

Program of Study

Certificate Courses				***24 hours***
AMT	102	Introduction to Industrial Electricity (3)		
AMT	112	Occupational Safety (3)		
COLL	101	College Orientation (1)		
CNS	101	Introduction to Electronics (3)		
ENER	142	Introduction to Wind (4)		
ENER	144*	Wind Turbine Troubleshooting (4)		
ENER	232*	Wind Turbine Internship (3)		
MATH	104*	Technical Mathematics **– OR –** MATH 125* (3)		
Communications				***9 hours***
Written Communications (6 hours)				
ENGL	101*			
ENGL	102*	***OR***	ENGL	104*
ENGL	203*			
Oral Communications (3 hours)				
COMM	104*			
Science				***5 hours***
PHYS	101 (5)			
Missouri Constitution				***3 hours***
HIST	106*			
PLSC	103*, 104*			
Required Courses				***20 hours***
AMT	132* (3)		ENER	105 (3)
AMT	204* (3)		ENER	160 (3)
BSAD	103 (2)		ENER	162* (3)
CNS	115 (3)			
AAS Approved Electives				***3 hours***
BSAD	115 (3)		ENER	256, 257, 258 Projects (1-3)
BSAD	125 (3)		MATH	112* (3)
CONS	243* (3)			

*Prerequisite requirement

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
AMT	102	Introduction to Industrial Electricity	3
AMT	112	Occupational Safety	3
BSAD	103	Professional Development	2
COLL	101	College Orientation	1
ENER	142	Introduction to Wind	4
		TOTAL	**13**

Spring Semester			***Hours***
CNS	101	Introduction to Electronics	3
ENER	144	Wind Turbine Troubleshooting	4
MATH	104	– OR – MATH 125	3
ENER	232	Wind Turbine Internship	3
		TOTAL	**13**

Graduate with Wind Energy Technician Certificate

SECOND YEAR

Fall Semester			***Hours***
ENER	105	Introduction to Energy	3
ENER	160	Intro to Process Technology	3
PHYS	101	Survey of Physical Science	5
Approved Written Communications Course			3
		TOTAL	**14**

Spring Semester			***Hours***
AMT	132	Industrial Hydraulics	3
AMT	204	Programmable Logic Controllers	3
COMM	104	Fundamentals of Speech	3
HIST	106	US History – OR – PLSC 103	3
Approved Written Communications Course			3
		TOTAL	**15**

THIRD YEAR

Fall Semester			***Hours***
CNS	115	CISCO Networking I	3
ENER	162	Intro to Electric Power Trans	3
Approved Elective			3
		TOTAL	**9**

Graduate with Wind Energy Technician AAS

Total CERTIFICATE Hours Required	**24**
Additional Hours Needed for AAS	**40**
Total AAS Hours Required	**64**

Students interested in enrolling in alternative energy classes should be advised through the MARET Center. For additional information, please contact 417-455-5422.

Courses for Certificate	
Additional Courses for AAS Degree	

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*	***OR***	ENGL 104*
Oral Communications (3 hours)			
COMM	104*		
Humanities			***9 hours***
Fine Arts (3 hours)		***Additional Humanities (3 hours)***	
MUSC	101	ASL	101, 102*
TA	205	ENGL	109, 120, 125
		HIST	101*
Literature (3 hours)		MUSC	101
ENGL	109, 120, 125	PHIL	101*,121, 201*, 202*
		SPAN	101
		SWK	219
		TA	205
Mathematics			***3 hours***
MATH	125*		
Physical Education			***2 hours***
		OR two of the following:	
PE	113	PE	102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144,145, 204*, 205*, 216*, 244*, 245*
Science			***10 hours***
Biological Science (5 hours)		***Physical Science (5 hours)***	
BIOL	101	CHEM	101, 104, 111*
		GEOL	115
		PHYS	101, 190*
Social and Behavioral Science			***9 hours***
Missouri Constitution (3 hours)		***Additional 3 Hours***	
HIST	106*	ECON	201*, 202*
PLSC	103*, 104*	GEOG	111
And 3 Hours		HIST	101*, 102*, 106*, 107*
ECON	201*, 202*	PHIL	110*, 121
GEOG	111	PLSC	103*, 104*, 205*
HIST	101*, 102*, 107*	PSYC	101, 210*, 215*
PHIL	121	SOC	101
PSYC	101		
SOC	101		
Major Courses			***18 hours***
ART	103	ART	107
ART	104	ART	110
ART	106	ART	111
Other Enhancement Course Options			
ART	105	ART	207*
ART	205	ART	210*
ART	206*	ART	211*

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
PE	113	Lifetime Fitness & Wellness	2
		TOTAL	**15**

Spring Semester			***Hours***
ART	103	Intro to 2-D Design	3
ART	110	Ceramics I	3
COMM	104	Fundamentals of Speech	3
ENGL	102	English Composition II	3
Approved Biological Science Course			5
		TOTAL	**17**

SECOND YEAR

Fall Semester			***Hours***
ART	106	Drawing I	3
ART	111	Sculpture I	3
Approved Physical Science Course			5
Approved Soc & Behavioral Science Course			3
		TOTAL	**14**

Spring Semester			**Hours**
ART	107	Painting I	3
HIST	106	– OR – PLSC 103, 104	3
Approved Humanities Course			3
Approved Literature Course			3
Approved Soc & Behavioral Science 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.

CERTIFICATE TO ASSOCIATE OF ARTS DEGREE

Autism Assistant 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	230*	Educational Psychology (3) (Not required for AA)
PSYC	101	General Psychology (3)
PSYC	203	Autism Spectrum Disorders (3)
PSYC	204	Applied Behavior Analysis for Educators (3)
PSYC	210*	Child Psychology (3)
PSYC	290*	Clinical I – Supervised Field Experience (3)

Communications ***9 hours***

Written Communications (6 hours)

ENGL 101*

ENGL 102* ***OR*** ENGL 104*

Oral Communications (3 hours)

COMM 104*

Humanities ***9 hours***

Fine Arts (3 hours)	***Additional Humanities (3 hours)***
ART 101	ART 101
MUSC 101	ASL 101, 102*
TA 205	ENGL 109, 120, 125
	FREN 101
Literature (3 hours)	HIST 101*
ENGL 109, 120, 125	MUSC 101
	PHIL 101*, 110*, 121, 201*, 202*
	SPAN 101
	SWK 219
	TA 205

Mathematics ***3 hours***

MATH 135*

Physical Education ***2 hours***

PE 113 ***OR two of the following:***

PE 102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*

Science ***10 hours***

Biological Science (5 hours)	***Physical Science (5 hours)***
BIOL 101	CHEM 101, 104, 111*
	GEOL 115
	PHYS 101, 190*

Social and Behavioral Science ***9 hours***

Missouri Constitution (3 hrs)	**Additional 3 Hours**
HIST 106*	ECON 201*, 202*
PLSC 103*, 104*	GEOG 111
And 3 Hours	HIST 101*, 102*, 106*, 107*
ECON 201*, 202*	PHIL 110*, 121
GEOG 111	PLSC 103*, 104*, 205*
HIST 101*, 102*, 107*	
PHIL 121	
SOC 101	

Major Courses ***3 hours***

EDUC 204*	PSYC 215* – OR – PSYC 290*
PSYC 211*	

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
COLL	101	College Orientation	1
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
Approved Physical Education Activity (for AA)			2
		TOTAL	**15**

Spring Semester			***Hours***
EDUC	231	Educational Psychology	3
ENGL	102	English Composition II (for AA)	3
PSYC	210	Child Psychology	3
PSYC	290	Clinical I – OR – PSYC 215 (for AA)	3
Approved Humanities Course (for AA)			3
		TOTAL	**15**

Graduate with Autism Assistant Certificate

SECOND YEAR

Fall Semester			***Hours***
EDUC	204	Foundations of Ed in a Diverse Society	3
HIST	106	– OR – PLSC 103, 104	3
MATH	135	Algebra for Calculus	3
Approved Social & Behavioral Science Course			3
Approved Physical Science Course			5
		TOTAL	**17**

Spring Semester			***Hours***
COMM	104	Fundamentals of Speech	3
Approved Biological Science Course			5
Approved Fine Arts Course			3
Approved Literature Course			3
Approved Social & Behavioral Science Course			3
		TOTAL	**17**

TOTAL HOURS REQUIRED 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.

Courses for Certificate	
Additional Courses for AAS Degree	

CERTIFICATE TO AAS

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 Cont (4)	
AUTO	225	Auto Suspension and Steering (5)	
Orientation			***1 hour***
COLL	101	College Orientation (1)	
Communications			***9 hours***
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*	– OR – ENGL 104*	
ENGL	203*		
Oral Communications (3 hours)			
COMM	104*		
Mathematics			***3 hours***
BSAD	121*		
MATH	104*		
Missouri Constitution			***3 hours***
HIST	106*		
PLSC	103*, 104*		
AAS Technical Courses			***6 hours***
BSAD	115	Computer Concepts (3) – OR – BSAD 125	
BSAD	150	Intro to Business (3)	

*Prerequisite requirement
±NOT required for AAS

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
COLL	101	College Orientation	1
COMM	104	Fundamentals of Speech	3
MATH	104	Tech Math – OR – BSAD 121	3
Approved Written Communications Course			3
		TOTAL	**13**

Spring Semester			***Hours***
BSAD	150	Intro to Business	3
HIST	106	American History (or PLSC 103)	3
Approved Written Communications Course			3
		TOTAL	**9**

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	**22**
Total Auto Tech AAS Hours Required	**61**

Courses for Certificate	
Additional Courses for AAS Degree	

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* ***OR***	ENGL	104*
Oral Communications (3 hours)			
COMM	104*		
Humanities			***9 hours***
Fine Arts (3 hours)		***Additional Humanities (3 hours)***	
ART	101	ART	101
MUSC	101	ASL	101, 102*
TA	205	ENGL	109, 120, 125
Literature (3 hours)		FREN	101
ENGL	109, 120, 125	HIST	101*
		MUSC	101
		PHIL	101*,121, 201*, 202*
		SPAN	101
		SWK	219
		TA	205
Mathematics			***5 hours***
MATH	112* & 135*		
Physical Education			***2 hours***
		OR two of the following:	
PE	113	PE	102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144,145, 204*, 205*, 216*, 244*, 245*
Science			***10 hours***
Biological Science (5 hours)		***Physical Science (5 hours)***	
BIOL	101	CHEM	111*
Social and Behavioral Science			***9 hours***
Missouri Constitution (3 hours)		***Additional 3 Hours***	
HIST	106*	ECON	201*, 202*
PLSC	103*, 104*	GEOG	111
And 3 Hours		HIST	101*, 102*, 106*, 107*
ECON	201*, 202*	PHIL	110*, 121
GEOG	111	PLSC	103*, 104*, 205*
HIST	101*, 102*, 107*	PSYC	101, 210*, 215*
PHIL	121	SOC	101
PSYC	101		
SOC	101		
Major Courses			***15 hours***
BIOL	110*	CHEM	112*
BIOL	120*		
Approved Electives			***5 hours***
BIOL	220*	MATH	150*
CHEM	201*	MATH	160*
CHEM	221*		

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
BIOL	101	Biology	5
COLL	101	College Orientation	1
ENGL	101	English Composition	3
MATH	135	Algebra for Calculus	3
PE	113	Lifetime Wellness	2
Approved Soc & Behavioral Science Course			3
		TOTAL	**17**

Spring Semester			***Hours***
BIOL	120	– OR – Approved Elective	5
ENGL	102	Advanced English Comp	3
HIST	106	– OR – PLSC 103, 104	3
MATH	112	Trigonometry	3
Approved Fine Arts Course			3
		TOTAL	**17**

SECOND YEAR

Fall Semester			***Hours***
BIOL	110	General Zoology	5
CHEM	111	General Chemistry I	5
Approved Literature 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 66

*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.

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.

*All students pursing this degree must take and pass the approved Technical Skills Assessment (TSA) prior to graduating. A fee will be charged for this test.

Program of Study

Orientation — ***1 hour***

COLL 101

Communications — ***9 hours***

Written Communications (6 hours)

ENGL 101*

ENGL 102* ***OR*** ENGL 104*

Oral Communications (3 hours)

COMM 104*

Humanities — ***9 hours***

Fine Arts (3 hours)		***Additional Humanities (3 hours)***	
ART	101	ART	101
MUSC	101	ASL	101, 102*
TA	205	ENGL	109, 120, 125
Literature (3 hours)		FREN	101
ENGL	109, 120, 125	HIST	101*
		MUSC	101
		PHIL	101*, 110*, 121, 201*, 202*
		SPAN	101
		SWK	219
		TA	205

Mathematics — ***3 hours***

MATH 125* **– OR –** MATH 135*

Physical Education — ***2 hours***

PE 113

OR two of the following:

PE 102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*

Science — ***10 hours***

Biological Science (5 hours)		***Physical Science (5 hours)***	
BIOL	101	CHEM	101, 104, 111*
		GEOL	115
		PHYS	101, 190*

Social and Behavioral Science — ***9 hours***

Missouri Constitution (3 hours)

PLSC 103*, 104* **OR** HIST 106*

Additional Social Science Courses (6 hours)

ECON 201* ECON 202*

Major Courses — ***12 hours***

ACCT 201 BSAD 125

ACCT 202* BSAD 150

Approved Electives — ***6 hours***

Courses must be approved and from the Business Department. Prefixes will be ACCT, BMGT, BSAD, or OA.

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
HIST	106	– OR – PLSC 103, 104	3
PE	113	Lifetime Fitness	2
Approved Biological Science Course			5
Approved Business Elective			3
		TOTAL	**16**

SECOND YEAR

Fall Semester			***Hours***
ACCT	201	Principles of Accounting I	3
ECON	201	Principles of Economics I	3
Approved Literature Course			3
Approved Physical Science Course			5
		TOTAL	**14**

Spring Semester			***Hours***
ACCT	202	Principles of Accounting II	3
ECON	202	Principles of Economics II	3
Approved Business Elective			3
Approved Fine Arts Course			3
Approved Humanities 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.

Certified Medical Assistant Certificate

Certified Medical Assistant AAS

The Certified Medical Assisting AAS degree provides students with the broad range of health, science, and office skills helpful for initial placement and career advancement in front and back office in a wide range of medical facilities such as in hospitals, doctor offices, and clinics. At the completion of the program, the student will sit for the Certified Medical Assistant National Exam. Students must pass a drug test and background check. Must be 18 years old to complete this program.

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			***33 hours***
CNA	106	Phlebotomy (3)	
COLL	101	College Orientation (1)	
MEDA	101	Introduction to Medical Assisting (3)	
MEDA	102*	Mathematical Application & Med Administration (2)	
MEDA	103*	Medical Assisting Science I (4)	
MEDA	104*	Clinical Medical Assisting I (2)	
MEDA	105*	Administrative Medical Assisting I (2)	
MEDA	203*	Medical Assisting Science II (4)	
MEDA	204*	Clinical Medical Assisting II (3)	
MEDA	205*	Administrative Medical Assisting II (3)	
MEDA	206*	Medical Assisting Internship (5)	
MEDA	207*	Medical Assisting Critique (1)	
Communications			***6 hours***
Written Communications (3 hours)			
ENGL	101*		
ENGL	102*	– OR – ENGL 104*	
ENGL	203*		
Oral Communications (3 hours)			
COMM	104		
Mathematics			***3 hours***
MATH	125*		
MATH	130*		
MATH	135*		
Missouri Constitution			***3 hours***
HIST	106*		
PLSC	103*, 104*		
Social and Behavioral Science			***3 hours***
PSYC	101		
Science			***5 hours***
CHEM	104	Chemistry for Health Sciences	
Certified Nurse Assistant			***3 hours***
CNA	107	EKG (3)	
Certified Medical Assistant			***9 hours***
MEDA	208*	Advanced Clinical Medical Assisting (2)	
MEDA	209*	Coding for the Physician's Office (5)	
MEDA	210*	Medical Office Management (2)	

*Prerequisite requirement

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
COLL	101	College Orientation	1
CNA	106	Phlebotomy	3
MEDA	101	Intro to Medical Assisting	3
MEDA	102	Math Application & Med Administration	2
MEDA	103	Medical Assisting Science I	4
MEDA	104	Clinical Medical Assisting I	2
MEDA	105	Administrative Medical Assisting I	2
		TOTAL	**17**

Spring Semester			***Hours***
MEDA	203	Medical Assisting Science II	4
MEDA	204	Clinical Medical Assisting II	3
MEDA	205	Administrative Medical Assisting II	3
MEDA	206	Medical Assisting Internship	5
MEDA	207	Medical Assisting Critique	1
		TOTAL	**16**

Graduate with Certified Medical Assistant Certificate

SECOND YEAR

Fall Semester			***Hours***
CHEM	104	Chemistry for Health Sciences	5
COMM	104	Fundamentals of Speech	3
PSYC	101	General Psychology	3
Approved Mathematics Course			3
Approved Written Communications Course			3
		TOTAL	**17**

Spring Semester			***Hours***
CNA	107	EKG	3
HIST	106	US History	3
MEDA	208	Adv Clinical Medical Assisting	2
MEDA	209	Coding for the Physician's Office	5
MEDA	210	Medical Office Management	2
		TOTAL	**15**

Graduate with Certified Medical Assistant AAS

Total CERTIFICATE Hours Required	**33**
Additional Hours Needed for AAS	**32**
Total AAS Hours Required	**65**

Courses for Certificate	
Additional Courses for AAS Degree	

Certified Nurse Assistant Certificate

Pharmacy Technician Certificate

Health Care Specialist AAS

This AAS degree provides students with the broad range of health, science, and office skills helpful for initial placement and career advancement in front and back office positions in a wide range of medical facilities such as in hospitals, doctor offices, veterinary clinics, pharmacies, and long-term and in-home care facilities.

This certificate program prepares students for employment as a Certified Nurse Assistant with medical skills helpful for initial placement in health care settings such as a hospital, clinic, long term care facility or home health; and students have a career path into the Health Care Specialist AAS. Must be 18 years of age and have a high school diploma.

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

CNA Major Courses		***8 hours***
CNA	101 CNA Techniques (5)	
CNA	102 CNA Clinical Experience (2)	
COLL	101 College Orientation (1)	
CNA Approved Electives		***9 or 10 hours***
CNA	103 Home Health Aide **AND** CNA 104 Home Health Aide Clinical (4)	
CNA	106 Phlebotomy (3)	
CNA	107 EKG (3)	
CNA	110 Restorative Nurse Assistant AND CNA 111 Restorative Nurse Assistant Clinical (3)	
EMR	101 Emergency Medical Responder (3)	
OA	215 Medical Terminology (3)	
Pharmacy Tech Major Courses		***15 hours***
BSAD	125 Bus Computer Apps (3) – OR – BSAD 115	
PHAR	101* Pharmacy Techniques I (3)	
PHAR	102* Pharmacy Techniques II (3)	
PHAR	110 Pharmacology Concepts (3)	
PHAR	150 Pharmacy Tech Internship* (3)	
Communications		***9 hours***
Written Communications (6 hours)		
ENGL	101*	
ENGL	102* **OR** ENGL 104*	
ENGL	203*	
Oral Communications (3 hours)		
COMM	104*	
Mathematics		***3 hours***
MATH	125* MATH 135*	
MATH	130*	
Missouri Constitution		***3 hours***
HIST	106* PLSC 103*	
Biological Sciences		***5 hours***
BIOL	101 BIOL 152	
Chemistry		***5 hours***
CHEM	104	
Health Sciences		***6 hours***
BIOL	252* (5) OTA 199 (1)	
CNA	120* (4) PE 115 (2)	
CNA	130 (3) PE 142 (3)	
EMT	101* (9) PSYC 101 (3)	

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
BSAD	125	– OR – BSAD 115 (Pharmacy)	3
COLL	101	College Orientation	1
CNA	101	CNA Techniques (CNA)	5
CNA	102	CNA Clinical Experience (CNA)	2
Approved CNA Electives (CNA)			4-6
		TOTAL	**15-17**

Spring Semester			***Hours***
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
Approved CNA Electives (CNA)			4-5
		TOTAL	**16-17**

Graduate with CNA Certificate
Graduate with Pharmacy Tech Certificate

SECOND YEAR

Fall Semester			***Hours***
BIOL	101	Gen Biology – OR – BIOL 151	5
COMM	104	Fundamentals of Speech	3
ENGL	101	English Composition I	3
PLSC	103	– OR – HIST 106	3
Approved Mathematics Course			3
		TOTAL	**17**

Spring Semester			***Hours***
CHEM	104	Chemistry for Health Sciences	5
Approved Written Communication			3
Approved Health Science Courses			6
		TOTAL	**14**

Graduate with Health Care Specialist AAS

Total CNA Certificate Hours Required	**17-18**
Additional Hrs for Pharmacy Tech Cert	**15**
Additional Hours Needed for AAS	**31**
Total Certificate to AAS Hours Required	**63-64**

Courses for Certificate	
Additional Courses for AAS Degree	

Certified Nurse Assistant Certificate

Health Care Specialist AAS

This AAS degree provides students with the broad range of health, science, and office skills helpful for initial placement and career advancement in front and back office positions in a wide range of medical facilities such as in hospitals, doctor offices, veterinary clinics, pharmacies, and long-term and in-home care facilities.

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

CNA Major Courses					***8 hours***
CNA	101 CNA Techniques (5)				
CNA	102 CNA Clinical Experience (2)				
COLL	101 College Orientation (1)				
CNA Approved Electives					***9 or 10 hours***
CNA	103 Home Health Aide **AND** CNA 104 Home Health Aide Clinical (4)				
CNA	106 Phlebotomy (3)				
CNA	107 EKG (3)				
CNA	110 Restorative Nurse Assistant **AND** CNA 111 Restorative Nurse Assistant Clinical (3)				
EMR	101 Emergency Medical Responder (3)				
OA	215 Medical Terminology (3)				
Communications					***9 hours***
Written Communications (6 hours)					
ENGL	101*				
ENGL	102*	**OR**	ENGL	104*	
ENGL	203*				
Oral Communications (3 hours)					
COMM	104*				
Mathematics					***3 hours***
MATH	125*		MATH	135*	
MATH	130*				
Missouri Constitution					***3 hours***
HIST	106*		PLSC	103*	
Biological Sciences					***5 hours***
BIOL	101		BIOL	152	
Chemistry					***5 hours***
CHEM	104				
Health Sciences					***21 hours***
BIOL	252* (5)		PE	142 (3)	
CNA	120* (4)		PHAR	101* (3)	
CNA	130 (3)		PHAR	102* (3)	
EMT	101* (9)		PHAR	110 (3)	
OTA	199 (1)		PHAR	150* (3)	
PE	115 (2)		PSYC	101 (3)	

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
COLL	101	College Orientation	1
CNA	101	CNA Techniques	5
CNA	102	CNA Clinical Experience	2
Approved CNA Electives			9-10
		TOTAL	**17-18**

Spring Semester			***Hours***
CHEM	104	Chemistry for Health Sciences	5
COMM	104	Fundamentals of Speech	3
ENGL	101	English Composition I	3
Approved Health Science Courses			5
		TOTAL	**16**

Graduate with CNA Certificate

SECOND YEAR

Fall Semester			***Hours***
BIOL	101	Gen Biology – OR – BIOL 151	5
Approved Health Science Courses			6
Approved Mathematics Course			3
		TOTAL	**14**

Spring Semester			***Hours***
PLSC	103	– OR – HIST 106	3
Approved Health Science Courses			10
Approved Written Communication			3
		TOTAL	**16**

Graduate with Health Care Specialist AAS

Total CNA Certificate Hours Required	**17-18**
Additional Hours Needed for AAS	**46**
Total AAS Hours Required	**63-64**

Courses for Certificate	
Additional Courses for AAS Degree	

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*	***OR***	ENGL 104*
Oral Communications (3 hours)			
COMM	104*		
Humanities			***9 hours***
Fine Arts (3 hours)		***Additional Humanities (3 hours)***	
ART	101	ART	101
MUSC	101	ASL	101, 102*
TA	205	ENGL	109, 120, 125
Literature (3 hours)		FREN	101
ENGL	109, 120, 125	HIST	101*
		MUSC	101
		PHIL	101*, 110*, 121, 201*, 202*
		SPAN	101
		SWK	219
		TA	205
Mathematics			***5 hours***
MATH	150* & 160*		
Physical Education			***2 hours***
		OR two of the following:	
PE	113	PE	102, 103, 104, 105, 110, 111, 114, 116, 117, 118,144, 145, 204*, 205*, 216*, 244*, 245*
Science			***10 hours***
Biological Science (5 hours)		***Physical Science (5 hours)***	
BIOL	101	CHEM	111*
Social and Behavioral Science			***9 hours***
Missouri Constitution (3 hrs)		***Additional 3 Hours***	
HIST	106*	ECON	201*, 202*
PLSC	103*, 104*	GEOG	111
And 3 Hours		HIST	101*, 102*, 106*, 107*
ECON	201*, 202*	PHIL	110*, 121
GEOG	111	PLSC	103*, 104*, 205*
HIST	101*, 102*, 107*	PSYC	101, 210*, 215*
PHIL	121	SOC	101
PSYC	101		
SOC	101		
Major Courses			***20 hours***
CHEM	112*	PHYS	190*
MATH	201*	PHYS	210*
Other Recommended Courses			
CHEM	201*	COMP	111*
CHEM	221*	MATH	202*

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
HIST	106	– OR – PLSC 103, 104	3
MATH	150	Calculus I, Part 1	2
		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 Fine Arts Course			3
Approved Soc & Behavioral Science Course			3
		TOTAL	**16**

Spring Semester			**Hours**
BIOL	101	General Biology	5
Approved Physical Education Activity			2
Approved Literature Course			3
Approved Humanities Course			3
Approved Soc & Behavioral Science Course			3
		TOTAL	**16**

TOTAL HOURS REQUIRED 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.

Collision Repair I & II Technician Certificates

Collision Repair Technology AAS

The Collision Repair Technology program prepares students for employment in the field of collision repair or related occupations in the automotive industry. The program is built around nationally recognized standards from the National Institute for Automotive Service Excellence (ASE) provided through the National Automotive Technicians Education Foundation (NATEF). Instructional materials for the core collision repair courses are provided through I-CAR (Inter-Industry Conference on Auto Collision Repair). The program is not currently ASE/NATEF certified, but the core courses cover all of the high-priority ASE/NATEF competencies in Non-Structural Repair, Structural Repair, and Painting/Finishing.

Collision Repair I Tech Cert - This certificate program trains graduates for entry-level employment in basic collision repair. Applicants must complete Crowder's standard entrance examination to determine placement in all courses having prerequisite requirements.

Collision Repair II Tech Cert - This certificate program trains graduates for entry-level employment in automotive collision repair. Applicants must complete Crowder's standard entrance examination to determine placement in all courses having prerequisite requirements.

Program of Study

Collision Repair I Core Courses			***19 hours***
CLRP	102	Auto Body Const & Sheet Metal (3)	
CLRP	104	Auto Body Plastics & Composites (3)	
CLRP	202	Auto Body Welding & Struct Straight (3)	
CLRP	204	Auto Body Painting & Refinishing (3)	
COLL	101	College Orientation (1)	
WELD	113	Intro to Welding (3) – OR – WELD 151*	
WELD	145*	Gas Metal Arc Welding (3) – OR – WELD 153*	
Collision Repair II Additional Courses			***9 hours***
AUTO	214	Automotive Air Conditioning (4)	
AUTO	225	Automotive Steering/Suspension (5)	
Communications			***9 hours***
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*	**– OR –** ENGL 104*	
ENGL	203*		
Oral Communications (3 hours)			
COMM	104		
Mathematics			***3 hours***
MATH	104*		
BSAD	121*		
Missouri Constitution			***3 hours***
HIST	106*		
PLSC	103*		
Support Courses			***8 hours***
BSAD	103	Professional Development (2)	
BSAD	115	Computer Concepts (3) **– OR –** BSAD 125	
BSAD	150	Introduction to Business (3)	
Collision Repair Core Courses			***5 hours***
AUTO	125	Automotive Electrical Systems (5)	
Approved Electives			***5 hours***
Any course not specifically required above and for which any pre-requisite courses have been completed from among: AMT, AUTO, BSAD, CNS, CONS, DIES, DRFT, or WELD. Other courses upon approval of advisor or Division Chair.			

*Prerequisite requirement

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
AUTO	214	Automotive Air Conditioning* **(Cert 2)**	4
COLL	101	College Orientation	1
CLRP	102	AB Const & Sheet Metal	3
CLRP	104	AB Plastics & Composites	3
WELD	113	Intro to Welding	3
WELD	145	Gas Metal Arc Welding	3
		TOTAL	**17**

Spring Semester			***Hours***
AUTO	225	Auto Steering & Suspension **(Cert 2)**	5
CLRP	202	AB Welding & Struct Straightening	3
CLRP	204	AB Painting & Refinishing	3
BSAD	115	– OR – BSAD 125	3
		TOTAL	**14**

Graduate with Collision Repair I & II Certificates

SECOND YEAR

Fall Semester			***Hours***
BSAD	150	Introduction to Business	3
COMM	104	Fundamentals of Speech	3
ENGL	101	English Composition I	3
MATH	104	Tech Math – OR – BSAD 121	3
PLSC	103	– OR – HIST 106	3
		TOTAL	**15**

Spring Semester			***Hours***
AUTO	125	Electrical Systems	5
BSAD	103	Professional Development	2
Approved Elective			5
Approved Written Communication			3
		TOTAL	**15**

Graduate with Collision Repair AAS

Total CERTIFICATE 1 Hours Required	**19**
Additional Hours Needed for Cert 2	**9**
Additional Hours Needed for AAS	**33**
Total AAS Hours Required	**61**

Courses for Certificate	
Additional Courses for AAS Degree	

CNS: PC Repair Certificate CNS: Cisco Networking Certificate

CNS: Information Technology 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 not wishing to complete a full two-year program in computer and network support 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 neither taking nor 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 not wishing to complete a full two-year program in computer and network support to 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 four 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 neither taking nor passing the CCNA exam is a formal requirement for obtaining the certificate.

Program of Study

PC Repair Technical Courses			***16 hours***
CNS	101	Introduction to Electronics (3)	
CNS	111	PC Basics I (3)	
CNS	112*	PC Basics II (3)	
CNS	115	Cisco Networking (3)	
CNS	125	Programming for CNS Technicians (3)	
COLL	101	College Orientation	
Information Technology Courses			***12 hours***
CNS	260	MS Network Administration* (3) [**Required for AAS**]	
CNS	265	MS Exchange Administration* (3) [**Required for AAS**]	
CNS	270	Network Security* (3) [**Elective for AAS**]	
CNS	275	Advanced MS Server* (3) [**Elective for AAS**]	
Cisco Networking Certificate			***9 hours***
CNS	116	Cisco Networking II (3)	
CNS	217	Cisco Networking III (3)	
CNS	218	Cisco Networking IV (3)	
Communications			***9 hours***
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*	– **OR** – ENGL 104*	
ENGL	203*		
Oral Communications (3 hours)			
COMM	104*		
Mathematics			***3 hours***
MATH	104*	MATH 135*	
Missouri Constitution			***3 hours***
HIST	106*	PLSC 103*	
Required Courses			***9 hours***
BSAD	103	– **OR** – CNS 105/106	
BSAD	115	– **OR** – BSAD 125	
CNS	285*	CNS Internship (4)	
CNS Electives			***3 hours***
CNS	250	Linux Network Administration (3)	
CNS	277	Data Management (3)	

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
COLL	101	College Orientation	1
CNS	101	Introduction to Electronics	3
CNS	111	PC Basics I	3
CNS	112	PC Basics II	3
CNS	115	Cisco Networking I	3
CNS	260	Microsoft Network Administration	3
		TOTAL	**16**

Spring Semester			***Hours***
CNS	125	Programming for CNS Technician	3
CNS	116	Cisco Networking II	3
CNS	265	Microsoft Exchange Administration	3
CNS	270	Network Security	3
CNS	275	Advanced Microsoft Server	3
		TOTAL	**15**

Graduate with PC Repair Certificate
Graduate with Information Technology Certificate

SECOND YEAR

Fall Semester			***Hours***
BSAD	115	Computer Concepts – OR – BSAD 125	3
CNS	105	Technical Career Development	1
CNS	217	Cisco Networking III	3
Approved CNS Elective			3
Approved Mathematics Course			3
Approved Written Communications Course			3
		TOTAL	**16**

Spring Semester			***Hours***
CNS	106	Technical Career Development	1
CNS	218	Cisco Networking IV	3
CNS	285	CNS Internship	4
COMM	104	Fundamentals of Speech	3
HIST	106	US History – OR – PLSC 103	3
Approved Written Communications Course			3
		TOTAL	**17**

Graduate with Cisco Certificate
Graduate with CNS Technology AAS

Total PC Repair Certificate Hours Required	**16**
Additional Hours Needed for IT Certificate	**12**
Additional Hours Needed for Cisco Certificate	**9**
Additional Hours Needed for AAS	**27**
Total AAS Hours Required	**64**

*Prerequisite requirement

Courses for Certificate	
Additional Courses for AAS Degree	

Computer Science AA

Computer Science is a technologically-oriented program of study that provides a foundation of computer programming, mathematics, and physical science-oriented course work for students intending to pursue a bachelor degree in this area. Students completing this two-year curriculum will transfer to a four-year college or university for upper division course work. After graduation from that institution, the student will be qualified for a career as an applications programmer, a systems programmer, or a systems analyst. 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* ***OR*** ENGL 104*

Oral Communications (3 hours)

COMM 104*

Humanities — ***9 hours***

Fine Arts (3 hours)	***Additional Humanities (3 hours)***
ART 101	ART 101
MUSC 101	ASL 101, 102*
TA 205	ENGL 109, 120, 125
Literature (3 hours)	FREN 101
ENGL 109, 120, 125	HIST 101*
	MUSC 101
	PHIL 101*, 110*, 121, 201*, 202*
	SPAN 101
	SWK 219
	TA 205

Mathematics — ***5 hours***

MATH 150* & 160*

Physical Education — ***2 hours***

PE 113

OR two of the following:

PE 102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*

Science — ***10 hours***

Biological Science (5 hours)	***Physical Science (5 hours)***
BIOL 101	PHYS 190*

Social and Behavioral Science — ***9 hours***

Missouri Constitution (3 hours)	***Additional 3 Hours***
HIST 106*	ECON 201*, 202*
PLSC 103*, 104*	GEOG 111
And 3 Hours	HIST 101*, 102*, 106*, 107*
ECON 201*, 202*	PHIL 110*, 121
GEOG 111	PLSC 103*, 104*, 205*
HIST 101*, 102*, 107*	PSYC 101, 210*, 215*
PHIL 121	SOC 101
PSYC 101	
SOC 101	

Major Courses — ***22 hours***

COMP 111*

COMP 140* ***OR*** COMP 200*

MATH 201*

MATH 202*

PHYS 210*

Recommended Additional Courses

COMP 140*

COMP 200*

MATH 210*

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
HIST	106	– OR – PLSC 103, 104	3
MATH	150	Calculus I, Part 1	2
		TOTAL	**16**

Spring Semester			***Hours***
COMP	140	– OR – COMP 200	3
ENGL	102	English Composition II	3
MATH	160	Calculus I, Part 2	3
PHYS	190	General Physics I	5
Approved Fine Arts Course			3
		TOTAL	**17**

SECOND YEAR

Fall Semester			***Hours***
MATH	201	Calculus II	5
PHYS	210	General Physics II	5
Approved Literature Course			3
Approved Physical Education Class			2
Approved Soc & Behavioral Science Course			3
		TOTAL	**18**

Spring Semester			***Hours***
MATH	202	Calculus III	5
Approved Biological Science Course			5
Approved Humanities Course			3
Approved Soc & Behavioral Science Course			3
		TOTAL	**16**

TOTAL HOURS REQUIRED 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.

Construction Technology Certificate

Construction: Alternative Technologies AAS

The Construction – Alternative Technologies 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 green building practices coupled with specialty options of general construction, construction management, or alternative technologies.

The Construction Technology certificate 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. All courses are based on the NCCER (National Council for Construction Education and Research) curriculum.

Program of Study

Construction Tech Certificate Courses			***10 hours***
COLL	101	College Orientation (1)	
CONS	105	Introduction to Construction Technology (3)	
CONS	112	Carpentry Fundamentals (3)	
CONS	116*	Framing & Finishing (3)	
Electives (All Required for Advanced Cert)			***6 hours***
CONS	121±	Masonry (3)	
CONS	131	Plumbing (3) (AAS Elective)	
CONS	141	Electrical (3) (AAS Elective)	
CONS	174*	Carpentry Forms (3)	
Communications			***9 hours***
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*	– **OR** – ENGL 104*	
ENGL	203*		
Oral Communications (3 hours)			
COMM	104*		
Mathematics			***3 hours***
MATH	135*		
Missouri Constitution			***3 hours***
HIST	106*	PLSC 103*	
Common Support Courses			***8 hours***
BSAD	103		
BSAD	115	– **OR** – BSAD 125	
DRFT	105*		
Common Construction Courses			***6 hours***
CONS	103*	Sustainable Building Fundamentals (3)	
CONS	290*	Construction Internship (3)	
Alternative Technology Courses			***21 hours***
AMT	102	Introduction to Industrial Electricity (3)	
CONS	155*	Basic HVAC (3)	
CONS	232	Site Layout (3)	
CONS	243*	Project Supervision (3)	
CONS	264*	Geothermal Heat Pump Systems (3)	
CONS	265*	Alt Energy Techniques (3)	
CONS	268*	Energy Usage Auditing (3)	

*Prerequisite requirement
±NOT required for AAS

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
AMT	102	Introduction to Industrial Electricity	3
COLL	101	College Orientation	1
CONS	103	Sustainable Bldg Fundamentals	3
CONS	105	Intro to Construction Technology	3
CONS	131	Plumbing (Elective for Cert)	3
CONS	141	Electrical (Elective for Cert)	3
		TOTAL	**16**

Spring Semester			***Hours***
BSAD	115	Computer Concepts – OR – BSAD 125	3
CONS	112	Carpentry Fundamentals	3
CONS	116	Framing and Finishing	3
CONS	155	Basic HVAC	3
DRFT	105	Architectural Drafting	3
		TOTAL	**15**

Graduate with Construction Technology Certificate

SECOND YEAR

Fall Semester			***Hours***
COMM	104	Fundamentals of Speech	3
CONS	232	Site Layout	3
CONS	265	Alt Energy Technology	3
MATH	135	Algebra for Calculus	3
PLSC	103	– OR – HIST 106	3
Approved Written Communications Course			3
		TOTAL	**18**

Spring Semester			***Hours***
CNS	105	/106 – OR – BSAD 103	2
CONS	243	Project Supervision	3
CONS	264	Geothermal Heat Pump Systems	3
Approved Written Communication			3
CONS	268	Energy Usage Auditing	3
CONS	290	Construction Internship	3
		TOTAL	**17**

Graduate with Construction: Alt Technologies AAS

Total Basic CERTIFICATE Hours Required	**16**
Additional Hours Needed for AAS	**50**
Total AAS Hours Required	**66**

Courses for Certificate	
Additional Courses for AAS Degree	

Construction Technology Certificate

Advanced Construction Technology Certificate

Construction: General AAS

The General Construction 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 green building practices coupled with specialty options of general construction, construction management, or alternative technologies.

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 Tech Certificate Courses			***10 hours***
COLL	101	College Orientation (1)	
CONS	105	Introduction to Construction Technology (3)	
CONS	112	Carpentry Fundamentals (3)	
CONS	116*	Framing & Finishing (3)	
Electives (All Required for Adv Cert & AAS)			***6 hours***
CONS	121	Masonry (3)	
CONS	131	Plumbing (3)	
CONS	141*	Electrical (3)	
Advanced Construction Tech Certificate Courses			***15 hours***
CONS	174*	Carpentry Forms (3)	
CONS	232	Site Layout (3)	
CONS	243*±	Project Supervision (3)	
CONS	245±	Project Management (3)	
CONS	265*	Alt Energy Techniques (3)	
Communications			***9 hours***
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*	– **OR** – ENGL 104*	
ENGL	203*		
Oral Communications (3 hours)			
COMM	104*		
Mathematics			***3 hours***
MATH	104*		
MATH	135*		
Missouri Constitution			***3 hours***
HIST	106*		
PLSC	103*		
Common Support Courses			***8 hours***
BSAD	103		
BSAD	115	– **OR** – BSAD 125	
DRFT	105*		
Common Construction Courses			***6 hours***
CONS	103*	Sustainable Building Fundamentals (3)	
CONS	290*	Construction Internship (3)	
Major Courses			***6 hours***
AMT	102	Introduction to Industrial Electricity (3)	
CONS	155*	Basic HVAC (3)	

*Prerequisite requirement
±NOT required for AAS

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
COLL	101	College Orientation	1
CONS	105	Intro to Construction Technology	3
CONS	131	Plumbing (Elective for Cert)	3
CONS	141	Electrical (Elective for Cert)	3
CONS	232	Site Layout (Adv Construction Cert)	3
		TOTAL	**13**

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 (Adv Construction Cert)	3
CONS	245	Project Mgmt (Adv Construction Cert)	3
		TOTAL	**15**

Graduate with Construction Technology Certificate

SECOND YEAR

Fall Semester			***Hours***
AMT	102	Introduction to Industrial Electricity	3
BSAD	115	Computer Concepts – OR – BSAD 125	3
COMM	104	Fundamentals of Speech	3
CONS	265	Alt Energy Technology (Adv Const Cert)	3
MATH	135	Algebra – OR – MATH 104	3
Approved Written Communications Course			3
		TOTAL	**18**

Spring Semester			***Hours***
BSAD	103	Pro Dev – OR – CNS 105/106	2
CONS	155	Basic HVAC	3
CONS	243	Project Supervision (Adv Const Cert)	3
DRFT	105	Architectural Drafting	3
PLSC	103	– OR – HIST 106	3
Approved Written Communication			3
		TOTAL	**17**

Graduate with Advanced Construction Tech Certificate

THIRD YEAR

Fall Semester			***Hours***
CONS	103	Sustainable Bldg Fundamentals	3
CONS	290	Construction Internship	3
		TOTAL	**6**

Graduate with General Construction AAS

Total Basic CERTIFICATE Hours Required	**16**
Additional Hours for Advanced Certificate	**18**
Additional Hours Needed for AAS	**35**
Total AAS Hours Required	**69**

Courses for Certificate	
Additional Courses for AAS Degree	

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			***10 hours***
COLL	101	College Orientation (1)	
CONS	105	Introduction to Construction Technology (3)	
CONS	112	Carpentry Fundamentals (3)	
CONS	116*	Framing & Finishing (3)	
Electives (All Required for Adv Cert & AAS)			***6 hours***
CONS	121	Masonry (3)	
CONS	131	Plumbing (3)	
CONS	141*	Electrical (3)	
Advanced Certificate Courses			***15 hours***
CONS	174*	Carpentry Forms (3)	
CONS	232	Site Layout (3)	
CONS	243*	Project Supervision (3)	
CONS	245*	Project Management (3)	
CONS	265*	Alternative Energy Techniques (3)	
Communications			***9 hours***
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*	– **OR** – ENGL 104*	
ENGL	203*		
Oral Communications (3 hours)			
COMM	104*		
Mathematics			***3 hours***
MATH	104*		
MATH	135*		
Missouri Constitution			***3 hours***
HIST	106*		
PLSC	103*		
Common Support Courses			***8 hours***
BSAD	103		
BSAD	115	– **OR** – BSAD 125	
DRFT	105*		
Common Construction Courses			***6 hours***
CONS	103*	Sustainable Building Fundamentals (3)	
CONS	290*	Construction Internship (3)	

* Prerequisite requirement

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
COLL	101	College Orientation	1
CONS	105	Intro to Construction Technology	3
CONS	131	Plumbing (Elective for Cert)	3
CONS	141	Electrical (Elective for Cert)	3
CONS	232	Site Layout	3
		TOTAL	**13**

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

SECOND YEAR

Fall Semester			***Hours***
BSAD	103	Pro Dev – OR – CNS 105/106	2
COMM	104	Fundamentals of Speech	3
CONS	265	Alt Energy Technology	3
MATH	135	Algebra – OR – MATH 104	3
Approved Written Communications Course			3
		TOTAL	**14**

Spring Semester			***Hours***
BSAD	115	Computer Concepts – OR – BSAD 125	3
CONS	243	Project Supervision	3
DRFT	105	Architectural Drafting	3
PLSC	103	– OR – HIST 106	3
Approved Written Communication			3
		TOTAL	**15**

Graduate with Advanced Construction Technology Certificate

THIRD YEAR

Fall Semester			***Hours***
CONS	103	Sustainable Bldg Fundamentals	3
CONS	290	Construction Internship	3
		TOTAL	**6**

Graduate with Construction Management AAS

Total Basic CERTIFICATE Hours Required	**16**
Additional Hours for Advanced Certificate	**18**
Additional Hours Needed for AAS	**29**
Total AAS Hours Required	**63**

Courses for Certificate	
Additional Courses for AAS Degree	

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*	***OR***	ENGL	104*
Oral Communications (3 hours)				
COMM	104*			
Humanities				***9 hours***
Fine Arts (3 hours)		***Additional Humanities (3 hours)***		
ART	101	ART	101	
MUSC	101	ASL	101, 102*	
TA	205	ENGL	109, 120, 125	
Literature (3 hours)		FREN	101	
ENGL	109, 120, 125	HIST	101*	
		MUSC	101	
		PHIL	101*, 110*, 121, 201*, 202*	
		SPAN	101	
		SWK	219	
		TA	205	
Mathematics				***3 hours***
MATH	135*			
Physical Education				***2 hours***
		OR two of the following:		
PE	113	PE	102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*	
Science				***10 hours***
Biological Science (5 hours)		***Physical Science (5 hours)***		
BIOL	101	CHEM	101, 104, 111*	
		GEOL	115	
		PHYS	101, 190*	
Social and Behavioral Science				***9 hours***
Missouri Constitution (3 hours)		***Additional 3 hours***		
HIST	106*	ECON	201*, 202*	
PLSC	103*, 104*	GEOG	111	
AND 3 hours		HIST	101*, 102*, 106*, 107*	
ECON	201*, 202*	PHIL	110*, 121	
GEOG	111	PLSC	103*, 104*, 205*	
HIST	101*, 102*, 107*	PSYC	101, 210*, 215*	
PHIL	121	SOC	101	
PSYC	101			
SOC	101			
Major Courses				***18 hours***
Required Courses (15 hours)		***Electives (3 hours)***		
CJ	101	CJ	102	
CJ	210	CJ	190	
CJ	250	CJ	270 **	
CJ	265	CJ	275	
CJ	280	CJ	290 **	

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 Fine Arts Course			3
Approved Physical Education Course			2
		TOTAL	**15**

Spring Semester			***Hours***
BIOL	101	General Biology	5
CJ	280	Report Writing	3
ENGL	102	– OR – ENGL 104	3
HIST	106	– OR – PLSC 103, 104	3
		TOTAL	**14**

SECOND YEAR

Fall Semester			***Hours***
CJ	210	Criminal Procedures	3
CJ	250	Criminal Law	3
COMM	104	Fundamentals of Speech	3
Approved Physical Science Course			5
Approved Soc & Behavioral Science Course			3
		TOTAL	**17**

Spring Semester			***Hours***
CJ	265	Ethics in Criminal Justice	3
Approved Criminal Justice Course			3
Approved Humanities Course			3
Approved Literature Course			3
Approved Soc & Behavioral Science Course			3
		TOTAL	**15**

TOTAL HOURS REQUIRED 61

*Prerequisite required

**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.

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

Certificate Courses			***22 hours***
CJ	101	Introduction to Criminal Justice (3)	
CJ	102	Crime Scene Processing (3)	
CJ	190	Patrol Operations (3)	
CJ	210	Criminal Procedures (3)	
CJ	250	Criminal Law (3)	
CJ	265	Ethics in Criminal Justice (3)	
CJ	280	Report Writing (3)	
COLL	101	College Orientation (1)	
Certificate Electives [All Required for AAS]			***3 hours***
CJ	270	Drug Investigation (3)	
CJ	275	The Juvenile Justice System (3)	
CJ	290	Police Supervision and Management (3)	
Communications			***9 hours***
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*	– **OR** – ENGL 104*	
Oral Communications (3 hours)			
COMM	104*		
Mathematics			***3 hours***
MATH	104*		
MATH	135*		
Missouri Constitution			***3 hours***
HIST	106*		
PLSC	103*		
Required Support Courses			***5 hours***
BSAD	103	– **OR** – CNS 105/106	
BSAD	115	– **OR** – BSAD 125	
Required CJ Courses			***9 hours***
CJ	103	Telecommunications (3)	
CJ	150	Corrections Officer (3)	
CJ	220	Security Officer (3)	

*Prerequisite requirement

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
CJ	101	Introduction to Criminal Justice	3
CJ	102	Crime Scene Processing	3
CJ	210	Criminal Procedures	3
CJ	250	Criminal Law	3
COLL	101	College Orientation	1
		TOTAL	**13**

Spring Semester			***Hours***
CJ	103	Telecommunications	3
CJ	190	Patrol Operations	3
CJ	265	Ethics in Criminal Justice	3
CJ	280	Report Writing	3
CJ	270	– OR – CJ 275 – OR – CJ 290	3
		TOTAL	**15**

Graduate with Criminal Justice Certificate

SECOND YEAR

Fall Semester			***Hours***
CJ	150	Corrections Officer	3
CJ	275	The Juvenile Justice System	3
COMM	104	Fundamentals of Speech	3
MATH	135	Algebra – OR – MATH 104	3
Approved Written Communications Course			3
		TOTAL	**15**

Spring Semester			***Hours***
BSAD	103	Pro Dev – OR – CNS 105/106	2
BSAD	115	– OR – BSAD 125	3
CJ	220	Security Officer	3
CJ	290	Police Supervision & Management	3
PLSC	103	– OR – HIST 106	3
Approved Written Communication			3
		TOTAL	**17**

Graduate with Criminal Justice AAS

Total CERTIFICATE Hours Required	**25**
Additional Hours Needed for AAS	**35**
Total AAS Hours Required	**60**

Courses for Certificate	
Additional Courses for AAS Degree	

CERTIFICATE TO AAS

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			***1 hour***
COLL	101	College Orientation (1)	
Communications			***9 hours***
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*	– **OR** – ENGL 104*	
ENGL	203*		
Oral Communications (3 hours)			
COMM	104*		
Mathematics			***3 hours***
MATH	104*		
Missouri Constitution			***3 hours***
HIST	106*	– **OR** – PLSC 103*	
Required Support Courses			***4 hours***
BSAD	115	– **OR** – BSAD 125	
CNS	106		

*Prerequisite requirement

Suggested Plan of Study

Students interested in enrolling in diesel technology classes should be advised through the Crowder Technical Education Center (CTEC). After advisement, the student should be enrolled through CTEC personnel. For additional information, please contact 417-455-5596.

Courses for Certificate	
Additional Courses for AAS Degree	

CERTIFICATE TO AAS

Drafting: Computer Aided Drafting (CAD) Technician Certificate

Drafting & Design Technology AAS

The Drafting and Design program begins with basic drafting and progresses through advanced design and Computer Aided Drafting (CAD). During this study, the different fields of drafting that an employee may be exposed to are covered. Drafting fields such as Architectural Drafting, Welding, Electronics, Plumbing and Structural Drafting are included to give the student some exposure to different areas in the industry. Computer aided drafting is taught in conjunction with all drafting classes to give the student experience in drawing and plotting drawings with the computer.

This 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, Print Reading. The CAD classes will provide general and advanced training in computer aided drafting as they are used in industry.

Program of Study

Certificate Courses			***18 hours***
DRFT	101	Intro to Engineering Drawing & Print Reading (3)	
DRFT	103	Technical Drawing (3)	
DRFT	115	Basic Computer Aided Drafting (3)	
DRFT	141	Assembly Drawings* (3)	
DRFT	205	Intermediate Computer Aided Drafting* (3)	
DRFT	215	Adv Computer Aided Drafting* (3) (Elective for AAS)	
Orientation			***1 hour***
COLL	101	College Orientation (1)	
Communications			***9 hours***
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*	– **OR** – ENGL 104*	
ENGL	203*		
Oral Communications (3 hours)			
COMM	104*		
Mathematics			***3 hours***
MATH	104*		
Science			***5 hours***
PHYS	101		
Missouri Constitution			***3 hours***
HIST	106*	PLSC 103*, 104*	
Required Technical Courses			***15 hours***
BSAD	115	Computer Concepts (3) – **OR** – BSAD 125	
DRFT	105	Architectural Drawing (3)	
DRFT	202*	Machine Design (3)	
DRFT	203*	Tool & Die Design (3)	
DRFT	280	Drafting and Design Internship (3)	
Approved Electives			***6 hours***
CNS	101	Intro to Electronics (3)	
DRFT	102	Descrip Geometry (3)	
DRFT	120*	Basic Civil Drafting (3)	
DRFT	220*	Geometric Dimen Toler (3)	
WELD	113	Intro to Welding (3) – OR – WELD 151	
Other Electives Approved by Program Director			

*Prerequisite requirement

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
DRFT	101	Intro to Eng Drawing & Print Reading	3
DRFT	115	Basic Computer Aided Drafting	3
DRFT	103	Technical Drawing	3
MATH	104	Technical Math	3
		TOTAL	**12**

Spring Semester			***Hours***
BSAD	115	Computer Concepts	3
DRFT	105	Architectural Drawing	3
DRFT	141	Assembly Drawings	3
DRFT	205	Intermediate CAD (1st 8 weeks)	3
DRFT	215	Advanced CAD (2nd 8 weeks)	3
		TOTAL	**15**

Graduate with Computer Aided Drafting Certificate

SECOND YEAR

Fall Semester			***Hours***
COLL	101	College Orientation	1
COMM	104	Fundamentals of Speech	3
PHYS	101	Survey of Physical Science	5
Approved Elective			3
Approved Written Communications Course			3
		TOTAL	**15**

Spring Semester			***Hours***
DRFT	202	Machine Design	3
DRFT	203	Tool and Die Design	3
PLSC	103	– OR – HIST 106	3
Approved Elective			3
Approved Written Communication			3
		TOTAL	**15**

Summer Semester			***Hours***
DRFT	280	DRFT Internship	3
		TOTAL	**3**

Graduate with Drafting & Design Technology AAS

Total CERTIFICATE Hours Required	**18**
Additional Hours Needed for AAS	**42**
Total AAS Hours Required	**60**

Courses for Certificate	
Additional Courses for AAS Degree	

Fire Science AA

The Fire Science program at Crowder College prepares the student to enter an exciting career as a fire fighter. The degree offers the opportunity for current fire fighters to prepare themselves as supervisors and leaders in their own departments. It also prepares students who wish to begin a career in firefighting. **Completion of FSCI 111 or current FF I & II state certification is required before enrollment in any other Fire Science course.**

Program of Study

Orientation — ***1 hour***

COLL 101

Communications — ***9 hours***

Written Communications (6 hours)

ENGL 101*

ENGL 102* ***OR*** ENGL 104*

Oral Communications (3 hours)

COMM 104*

Humanities — ***9 hours***

Fine Arts (3 hours)	***Additional Humanities (3 hours)***
ART 101	ART 101
MUSC 101	ASL 101, 102*
TA 205	ENGL 109, 120, 125
Literature (3 hours)	FREN 101
ENGL 109, 120, 125	HIST 101*
	MUSC 101
	PHIL 101*, 110*, 121, 201*, 202*
	SPAN 101
	SWK 219
	TA 205

Mathematics — ***3 hours***

MATH 125*, 130*, 135*

Physical Education — ***2 hours***

PE 113

OR two of the following:

PE 102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*

Science — ***10 hours***

Biological Science (5 hours)	***Physical Science (5 hours)***
BIOL 101, 110*, 152*	CHEM 101, 104, 111*
	GEOL 115
	PHYS 101, 190*

Social and Behavioral Science — ***9 hours***

Missouri Constitution (3 hours)	***Additional 3 Hours***
HIST 106*	ECON 201*, 202*
PLSC 103*, 104*	GEOG 111
And 3 Hours	HIST 101*, 102*, 106*, 107*
ECON 201*, 202*	PHIL 110*, 121
GEOG 111	PLSC 103*, 104*, 205*
HIST 101*, 102*, 107*	PSYC 101, 210*, 215*
PHIL 121	SOC 101
PSYC 101	
SOC 101	

Major Courses* — ***12 hours***

FSCI 102*	FSCI 108
FSCI 107	FSCI 205*

Approved Electives — ***6 hours***

FSCI 103*	FSCI 208*
FSCI 109	FSCI 210*
FSCI 202	FSCI 212
FSCI 207*	FSCI 263

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
COLL	101	College Orientation	1
ENGL	101	English Composition I	3
FSCI	107	Fire Service Hydraulics	3
FSCI	108	Fire Protection Systems	3
Approved Fine Arts Course			3
Approved Mathematics Course			3
		TOTAL	**16**

Spring Semester			***Hours***
ENGL	102	– OR – ENGL 104	3
FSCI	102	Building Construction	3
FSCI	205	Tactics & Strategies	3
HIST	106	– OR – PLSC 103, 104	3
Approved Biological Science Course			5
		TOTAL	**17**

SECOND YEAR

Fall Semester			***Hours***
COMM	104	Fundamentals of Speech	3
Approved Fire Science Course			3
Approved Physical Science Course			5
Approved Soc & Behavioral Sciences Course			3
		TOTAL	**14**

Spring Semester		***Hours***
Approved Fire Science Course		3
Approved Humanities Course		3
Approved Literature Course		3
Approved Physical Education Course		2
Approved Soc & Behavioral Science Course		3
	TOTAL	**14**

TOTAL HOURS REQUIRED 61

*Prerequisite required

Fire Science Program Prerequisite – FSCI 111 Fire Fighter I & II (6) or current FF I & II state certification

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

Fire Science AAS

The Fire Science Program at Crowder College prepares the student to enter an exciting career as a firefighter. The degree offers the opportunity for current firefighters to prepare themselves as supervisors and leaders in their own departments. It also prepares students who wish to begin a career in fire fighting.

Program of Study

Orientation			***1 hour***
COLL	101		
Communications			***9 hours***
Written Communications (6 hours)			
ENGL	101		
ENGL	203*		
Oral Communications (3 hours)			
COMM	104*		
Mathematics			***3 hours***
BSAD	121*		
MATH	135*		
Science			***5 hours***
CHEM	101, 111*		
BIOL	101, 152*		
Missouri Constitution			***3 hours***
HIST	106*		
PLSC	103*, 104*		
Required Fire Science Courses*			***30 hours***
FSCI	102*	Bldg Construction Related to F/S (3)	
FSCI	107	Fire Service Hydraulics & Pump Ops (3)	
FSCI	108	Fire Protection System (3)	
FSCI	109	Legal Aspects of Emer Services (3)	
FSCI	205*	Tactics & Strategies (3)	
FSCI	208*	The Company Officer (3)	
FSCI	210*	Fire Service Instructor (3)	
FSCI	212	Occup Safe/Health FS (3)	
FSCI	111	Firefighter I & II (6)	
OR	Current FF I & II state certification		
Approved Electives			***15 hours***
EMT	101	Emergency Med Tech (9)	
FSCI	103*	Fire Investigation (3)	
FSCI	202	Hazardous Materials (3)	
FSCI	207*	Fire Prevention/Code Enforcement (3)	
FSCI	263	Problems in FS (Internship) (3)	

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
FSCI	111	Fire Fighter I & II	6
MATH	135	Algebra for Calculus	3
		TOTAL	**16**

Spring Semester			***Hours***
EMT	101	Emergency Medical Tech	9
FSCI	102	Building Construction	3
FSCI	109	Legal Aspects of Emer Services	3
		TOTAL	**15**

SECOND YEAR

Fall Semester			***Hours***
FSCI	107	Fire Service Hydraulics & Fire Pump Op	3
FSCI	108	Fire Protection Systems	3
FSCI	208	The Company Officer	3
Approved Science Course			5
Approved Fire Science Elective			3
		TOTAL	**17**

Spring Semester			***Hours***
ENGL	203	Technical Report Writing	3
FSCI	205	Tactics & Strategies	3
FSCI	210	Fire Service Instructor	3
FSCI	212	Occ Safety & Health for the Fire Service	3
HIST	106	US History – OR – PLSC 103, 104	3
Approved Fire Science Elective			3
		TOTAL	**18**

TOTAL HOURS REQUIRED 66

*Prerequisite requirement

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.

****Completion of FSCI 111 or FF I & II state certification is required before enrollment in any other Fire Science course.**

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* ***OR*** ENGL 104*

Oral Communications (3 hours)

COMM 104*

Humanities ***9 hours***

Fine Arts (3 hours)		***Additional Humanities (3 hours)***	
ART	101	ART	101
MUSC	101	ASL	101, 102*
TA	205	ENGL	109, 120, 125
Literature (3 hours)		FREN	101
ENGL	109, 120, 125	HIST	101*
		MUSC	101
		PHIL	101*, 110*, 121, 201*, 202*
		SPAN	101
		SWK	219
		TA	205

Mathematics ***3 hours***

MATH 125*, 130*, 135*

Physical Education ***2 hours***

PE 113

OR two of the following:

PE 102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*

Science ***10 hours***

Biological Science (5 hours)		***Physical Science (5 hours)***	
BIOL	101 (recommended)	CHEM	101, 104, 111*
BIOL	152*	GEOL	115
		PHYS	101, 190*

Social and Behavioral Science ***9 hours***

Missouri Constitution (3 hours)		***Additional 3 hours***	
HIST	106*	ECON	201*, 202*
PLSC	103*, 104*	GEOG	111
AND 3 hours		HIST	101*, 102*, 106*, 107*
ECON	201*, 202*	PHIL	110*, 121
GEOG	111	PLSC	103*, 104*, 205*
HIST	101*, 102*, 107*	PSYC	101, 210*, 215*
PHIL	121	SOC	101
PSYC	101		
SOC	101		

Approved Electives *18 hours*
(Courses cannot be used as electives if counted under another section and must be numbered 100 or higher)

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
PE	113	Lifetime Fit and Wellness	2
Approved General Studies Elective			3
Approved Mathematics Course			3
		TOTAL	**15**

Spring Semester			***Hours***
ENGL	102	English Composition II	3
Approved Biological Science Course			5
Approved Fine Arts Course			3
Approved General Studies Elective			3
Approved Missouri Constitution Course			3
		TOTAL	**17**

SECOND YEAR

Fall Semester	***Hours***
Approved General Studies Elective	3
Approved General Studies Elective	3
Approved Literature Course	3
Approved Physical Science Course	5
TOTAL	**14**

Spring Semester	***Hours***
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.

Graphic Design AA

The Associate of Arts Degree in Graphic 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's degrees are offered in graphic design, digital 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* ***OR*** ENGL 104*

Oral Communications (3 hours)

COMM 104*

Humanities — ***9 hours***

Fine Arts (3 hours)	***Additional Humanities (3 hours)***
MUSC 101	ASL 101, 102*
TA 205	ENGL 109, 120, 125
	HIST 101*
Literature (3 hours)	MUSC 101
ENGL 109, 120, 125	PHIL 101*,121, 201*, 202*
	SPAN 101, 102*
	SWK 219
	TA 205

Mathematics — ***3 hours***

MATH 125*

Physical Education — ***2 hours***

PE 113

OR two of the following:

PE 102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*

Science — ***10 hours***

Biological Science (5 hours)	***Physical Science (5 hours)***
BIOL 101	CHEM 101, 104, 111*
	GEOL 115
	PHYS 101, 190*

Social and Behavioral Science — ***9 hours***

Missouri Constitution (3 hours)	***Additional 3 Hours***
HIST 106*	ECON 201*, 202*
PLSC 103*, 104*	GEOG 111
And 3 Hours	HIST 101*, 102*, 106*, 107*
ECON 201*, 202*	PHIL 110*, 121
GEOG 111	PLSC 103*, 104*, 205*
HIST 101*, 102*, 107*	PSYC 101, 210*, 215*
PHIL 121	SOC 101
PSYC 101	
SOC 101	

Major Courses — ***18 hours***

ART 190 Illustrator	ART 192* InDesign & Web
ART 191 Photoshop	ART 193* Typography
	ART 194* Portfolio

One of the following:

ART 103, 104, 105, 106, 107
110, 111, 206, 207, 210

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
ART	190	Graphic Design I	3
COLL	101	College Orientation	1
ENGL	101	English Composition I	3
MATH	125	Quantitative Reasoning	3
MUSC	101	– OR – TA 205	3
PE	113	Lifetime Fitness & Wellness	2
		TOTAL	**15**

Spring Semester			***Hours***
ART	103	– OR – 104, 105, 106, 107, 110, 111, 206, 207, 210	3
ART	191	Graphic Design II	3
COMM	104	Fundamentals of Speech	3
ENGL	102	English Composition II	3
Approved Biological Science Course			5
		TOTAL	**17**

SECOND YEAR

Fall Semester			***Hours***
ART	192	Graphic Design III	3
ART	193	Typography	3
Approved Physical Science Course			5
Approved Social & Behavioral Sci Course			3
		TOTAL	**14**

Spring Semester			**Hours**
ART	194	Graphic Design IV	3
HIST	106	– OR – PLSC 103, 104	3
Approved Humanities Course			3
Approved Literature Course			3
Approved Social & 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.

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*	***OR***	ENGL 104*
Oral Communications (3 hours)			
COMM	104*		
Humanities			***9 hours***
Fine Arts (3 hours)		***Additional Humanities (3 hours)***	
ART	101	ART	101
MUSC	101	ASL	101, 102*
TA	205	ENGL	109, 120, 125
Literature (3 hours)		FREN	101
ENGL	109, 120, 125	MUSC	101
		PHIL	101*, 110*, 121, 201*, 202*
		SPAN	101
		SWK	219
		TA	205
Mathematics			***3 hours***
MATH	125*		
Physical Education			***2 hours***
		OR two of the following:	
PE	113	PE	102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*
Science			***10 hours***
Biological Science (5 hours)		***Physical Science (5 hours)***	
BIOL	101	CHEM	101, 104, 111*
		GEOL	115
		PHYS	101, 190*
Social and Behavioral Science			***9 hours***
Missouri Constitution (3 hours)		***Additional (3 hours)***	
PLSC	103*, 104*	ECON	201*, 202*
3 hours of the following:		GEOG	111
ECON	202*	PHIL	110*, 121
PHIL	121	PLSC	205*
SOC	101	PSYC	101, 210*, 215*
		SOC	101, 103*
Major Courses			***18 hours***
Required Courses (12 hours)			
HIST	101*	HIST	106*
HIST	102*	HIST	107*
Approved Electives (6 hours)			
ECON	201*	PHIL	121
ECON	202*	PSYC	101
GEOG	111	SOC	101

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***
BIOL	101	General Biology	5
ENGL	102	English Composition II	3
HIST	107	U.S. History II	3
PLSC	103	Nat, State, & Local Gov't	3
Approved Fine Arts Course			3
		TOTAL	**17**

SECOND YEAR

Fall Semester			***Hours***
HIST	101	Western Civilization I	3
Approved Literature Course			3
Approved Physical Science Course			5
Approved Elective			3
		TOTAL	**14**

Spring Semester			***Hours***
HIST	102	Western Civilization II	3
PE	113	Lifetime Fit and Wellness	2
Approved Humanities Course			3
Approved Soc & Behavioral Science Course			3
Approved Elective			3
		TOTAL	**14**

TOTAL HOURS REQUIRED 61

*Prerequisite required

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Information Science AA

Information Science is a business-oriented program of study that provides a foundation of computer programming and business course work for students intending to pursue a bachelor degree in this area. In this program, the level of required mathematics is less than that for the computer science program. Students completing this two-year curriculum will transfer to a four-year college or university for upper division course work. After graduation from that institution, the student will be qualified for a career as a business applications programmer, a systems programmer or a systems analyst.

Program of Study

Orientation — ***1 hour***

COLL 101

Communications — ***9 hours***

Written Communications (6 hours)

ENGL 101*

ENGL 102* ***OR*** ENGL 104*

Oral Communications (3 hours)

COMM 104*

Humanities — ***9 hours***

Fine Arts (3 hours)	***Additional Humanities (3 hours)***
ART 101	ART 101
MUSC 101	ASL 101, 102*
TA 205	ENGL 109, 120, 125
	FREN 101
Literature (3 hours)	HIST 101*
ENGL 109, 120, 125	MUSC 101
	PHIL 101*, 110*, 121, 201*, 202*
	SPAN 101
	SWK 219
	TA 205

Mathematics — ***3 hours***

MATH 135*

Physical Education — ***2 hours***

PE 113

OR two of the following:

PE 102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*

Science — ***10 hours***

Biological Science (5 hours)	***Physical Science (5 hours)***
BIOL 101	CHEM 101, 104, 111*
	GEOL 115
	PHYS 101, 190*

Social and Behavioral Science — ***9 hours***

Missouri Constitution (3 hours)

PLSC 103*, 104* ***OR*** HIST 106*

Additional Social Science Courses (6 hours)

ECON 201* ECON 202*

Major Courses — ***22 hours***

Required (19 hours)

BSAD 150 COMP 111*

ACCT 201 COMP 140*

ACCT 202* COMP 200*

Elective (3 hours)

Any BSAD course

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
COLL	101	College Orientation	1
COMP	111	Intro to Programming	4
ECON	201	Principles of Economics I	3
ENGL	101	English Composition I	3
HIST	106	– OR – PLSC 103, 104	3
MATH	135	Algebra for Calculus	3
		TOTAL	**17**

Spring Semester			***Hours***
BIOL	101	General Biology	5
BSAD	150	Introduction to Business	3
COMP	140	– OR – COMP 200	3
ENGL	102	English Composition II	3
Approved Fine Arts Course			3
		TOTAL	**17**

SECOND YEAR

Fall Semester			***Hours***
ACCT	201	Principles of Accounting I	3
COMM	104	Fundamentals of Speech	3
Approved Literature Course			3
Approved Physical Education Activity			2
Approved Physical Science Course			5
		TOTAL	**16**

Spring Semester			***Hours***
ACCT	202	Principles of Accounting II	3
COMP	140	– OR – COMP 200	3
ECON	202	Principles of Economics II	3
Approved BSAD Course			3
Approved Humanities Course			3
		TOTAL	**15**

TOTAL HOURS REQUIRED **65**

*Prerequisite required

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Journalism and Public Relations 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*	***OR***	ENGL 104*
Oral Communications (3 hours)			
COMM	104*		
Humanities			***9 hours***
Fine Arts (3 hours)		***Additional Humanities (3 hours)***	
ART	101	ART	101
MUSC	101	ASL	101, 102*
TA	205	ENGL	109, 120, 125
		FREN	101
Literature (3 hours)		HIST	101*
ENGL	109, 120, 125	MUSC	101
		PHIL	101*, 110*, 121, 201*, 202*
		SPAN	101
		SWK	219
		TA	205
Mathematics			***3 hours***
MATH	125*		
Physical Education			***2 hours***
		OR two of the following:	
PE	113	PE	102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*
Science			***10 hours***
Biological Science (5 hours)		***Physical Science (5 hours)***	
BIOL	101	CHEM	101, 104, 111*
		GEOL	115
		PHYS	101, 190*
Social and Behavioral Science			***9 hours***
Missouri Constitution (3 hours)		***Additional 3 hours***	
HIST	106*	ECON	201*, 202*
PLSC	103*, 104*	GEOG	111
AND 3 hours		HIST	101*, 102*, 106*, 107*
ECON	201*, 202*	PHIL	110*, 121
GEOG	111	PLSC	103*, 104*, 205*
HIST	101*, 102*, 107*	PSYC	101, 210*, 215*
PHIL	121	SOC	101
PSYC	101		
SOC	101		
Major Courses			***15 hours***
COMM	101	COMM	150*
COMM	102	COMM	151*
COMM	111*		
Approved Electives			***3 hours***
COMM	160	COMM	250*
COMM	220	COMM	251*
COMM	225*		

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	101	Intro to Mass 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***
BIOL	101	Biology	5
HIST	106	– OR – PLSC 103	3
Approved Fine Arts Course			3
Approved Literature Course			3
Approved Physical Education Activity			1
		TOTAL	**15**

Spring Semester	***Hours***
Approved Humanities Course	3
Approved Journalism Elective	3
Approved Physical Education Activity	1
Approved Physical Science Course	5
Approved Soc & Behavioral Science Course	3
TOTAL	**15**

TOTAL HOURS REQUIRED 61

*Prerequisite required

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Management 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 pursing this degree must take and pass the approved Technical Skills Assessment (TSA) prior to graduating. A fee will be charged for this test.

Program of Study

Orientation			***1 hour***
COLL	101		
Communications			***9 hours***
Written Communications (6 hours)			
ENGL	101*		
ENGL	203*		
Oral Communications (3 hours)			
COMM	104*		
Mathematics			***3 hours***
BSAD	121*		
Missouri Constitution			***3 hours***
HIST	106*		
PLSC	103*, 104*		
Business Core			***13 hours***
BMGT	223 (3)		
BMGT	290 (2)		
BSAD	103 (2)		
BSAD	125 (3)		
BSAD	130* (3)		
Management Core			***33 hours***
ACCT	201 (3)	BSAD	150 (3)
ACCT	202* (3)	BSAD	218* (3)
BMGT	175 (3)	BSAD	230 (3)
BMGT	200 (3)	ECON	201 (3)
BMGT	285* (3)	OA	115 (3)
BSAD	108 (3)		

*Prerequisite requirement

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
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
OA	115	Customer Service	3
		TOTAL	**16**

Spring Semester			***Hours***
BMGT	175	Management	3
BSAD	218	Spreadsheets (Spring only)	3
BSAD	230	Business Law	3
COMM	104	Fundamentals of Speech	3
ENGL	203	Technical Report Writing	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
PLSC	103	– OR – HIST 106	3
		TOTAL	**15**

Spring Semester			***Hours***
ACCT	202	Principles of Accounting II	3
BMGT	285	Human Res Mgmt (Spring only)	3
BMGT	290	Management Internship	2
BSAD	103	Professional Development	2
BSAD	130	Business Communications	3
ECON	201	Principles of Economics I	3
		TOTAL	**16**
		TOTAL HOURS REQUIRED	**62**

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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*	***OR***	ENGL 104*
Oral Communications (3 hours)			
COMM	104*		
Humanities			***9 hours***
Fine Arts (3 hours)		***Additional Humanities (3 hours)***	
ART	101	ART	101
MUSC	101	ASL	101, 102*
TA	205	ENGL	109, 120, 125
		FREN	101
Literature (3 hours)		HIST	101*
ENGL	109, 120, 125	MUSC	101
		PHIL	101*, 110*, 121, 201*, 202*
		SPAN	101
		SWK	219
		TA	205
Mathematics			***5 hours***
MATH	150* & 160*		
Physical Education			***2 hours***
PE	113	***OR two of the following:***	
		PE	102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*
Science			***10 hours***
Biological Science (5 hours)		***Physical Science (5 hours)***	
BIOL	101	PHYS	190*
Social and Behavioral Science			***9 hours***
Missouri Constitution (3 hours)		***Additional 3 Hours***	
HIST	106*	ECON	201*, 202*
PLSC	103*, 104*	GEOG	111
And 3 Hours		HIST	101*, 102*, 106*, 107*
ECON	201*, 202*	PHIL	110*, 121
GEOG	111	PLSC	103*, 104*, 205*
HIST	101*, 102*, 107*	PSYC	101, 210*, 215*
PHIL	121	SOC	101
PSYC	101		
SOC	101		
Major Courses			***17-19 hours***
Required Courses (14 hours)			
COMP	111*	MATH	202*
MATH	201*		
Approved Electives (3-5 hours)			
MATH	210*	PHYS	210*

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
HIST	106	– OR – PLSC 103, 104	3
MATH	150	Calculus I, Part 1	2
		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 Physical Educations Activity			2
Approved Fine Arts Course			3
		TOTAL	**16**

SECOND YEAR

Fall Semester			***Hours***
BIOL	101	General Biology	5
MATH	201	Calculus II	5
Approved Literature Course			3
Approved Soc & Behavioral Science Course			3
		TOTAL	**16**

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 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.

ASSOCIATE OF APPLIED SCIENCE DEGREE

Medical Administrative Assistant AAS

The medical profession is rapidly changing, and with these changes comes the need for highly skilled support personnel. Crowder's Associate of Applied Science Medical Administrative Assistant degree is designed to prepare individuals for employment as office support staff and medical transcriptionists in a variety of health care settings including private medical practices, hospitals, clinics, public health departments, government agencies, or insurance firms. Students develop important career skills in typing/transcription, document filing/processing, medical billing and coding, medical records handling, and medical office procedures. It provides training for both first-time job seekers and experienced employees who wish to advance in their careers.

*All students pursing this degree must take and pass the approved Technical Skills Assessment (TSA) prior to graduating. A fee will be charged for this test.

Program of Study

Orientation			***1 hour***
COLL	101		
Communications			***9 hours***
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*	– OR – ENGL 104*	
ENGL	203*		
Oral Communications (3 hours)			
COMM	104*		
Mathematics			***3 hours***
BSAD	121*		
Missouri Constitution			***3 hours***
HIST	106*		
PLSC	103*, 104*		
Business Core			***13 hours***
BMGT	223	Business Ethics (3)	
BSAD	103	Professional Development (2)	
BSAD	125	Computer Applications (3)	
BSAD	130*	Business Communications (3)	
OA	233	Medical Office Internship (2)	
Medical Assistant Core			***30 hours***
ACCT	101	Practical Accounting (3) – OR – ACCT 201	
BSAD	219*	Database Management (3)	
OA	102	Filing Systems & Records Mgmt (3)	
OA	107	College Keyboarding (3)	
OA	115	Customer Service (3)	
OA	200*	Word Processing (3)	
OA	212	Med Office Procedures (3)	
OA	215	Medical Terminology (3)	
OA	225*	ICD Coding (3)	
OA	235*	CPT Coding (3)	
Electives			***3 hours***
Electives can be taken from ACCT, BSAD, BMGT, OA, or ECON			

*Prerequisite requirement

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
BSAD	121	Business Math	3
COLL	101	College Orientation	1
COMM	104	Fundamentals of Speech	3
ENGL	101	Composition	3
OA	107	College Keyboarding (Fall only)	3
OA	115	Customer Service	3
		TOTAL	**16**

Spring Semester			***Hours***
ACCT	101	Pract Acctg – OR – ACCT 201	3
BSAD	125	Computer Applications	3
ENGL	102	– OR – ENGL 104 – OR – 203	3
HIST	106	US History – OR – PLSC 103,104	3
OA	102	Filing Sys & Recs Mgmt (Spring only)	3
		TOTAL	**15**

SECOND YEAR

Fall Semester			***Hours***
BMGT	223	Business Ethics (Fall only)	3
BSAD	130	Business Communications	3
BSAD	219	Database Management (Fall only)	3
OA	200	Word Processing (Fall only)	3
OA	215	Medical Terminology	3
		TOTAL	**15**

Spring Semester			***Hours***
BSAD	103	Professional Development	2
OA	212	Med Office Procedures (Spring only)	3
OA	225	ICD Coding (Spring only)	3
OA	233	Medical Office Internship	2
OA	235	CPT Coding (Spring only)	3
Approved Business Elective			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.

Nursing AS

The purpose of the Crowder College Nursing program is to prepare graduates who can demonstrate entry-level competencies as registered nurses, to provide a foundation for continued learning, and to provide 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.

The nursing faculty strongly believes that the learner must be an active participant in the educational process. A wide variety of instructional methods are utilized in the process oriented nursing curriculum. Registered nurses function as an integral part of the health care team in many different roles. They are responsible for planning, implementing, and evaluating patient care as well as for the supervision of other health care workers. The nursing program is a multiple entry, limited admission program. A grade point average of 2.75 and a minimum ACT composite score of 19 are required for both levels of students. 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 Nurse Assistant Certification or EMT certification or Paramedic license prior to beginning the nursing course. Applications for Level I are accepted from April 15 to August 15 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, be IV certified, and must have completed at least Anatomy and Physiology I and II and Microbiology before beginning the second level nursing sequence. Applications for Level II are accepted from April 15 to August 15 for the Neosho and Cassville program and October 15 to February 15 for the Nevada and McDonald County program.
All classes must be passed with a C or better.

Program of Study

Orientation			***1 hour***
COLL	101		
Communications			***6 hours***
Written Communications (3 hrs)		***Oral Communications (3 hrs)***	
ENGL	101*, 104*	COMM	104*
Humanities			***3 hours***
ART	101	MUSC	101
ASL	101, 102*	PHIL	101*, 110*, 121, 201*, 202*
ENGL	109, 120, 125	SPAN	101, 111
FREN	101	SWK	219
HIST	101*	TA	205
Mathematics			***3 hours***
MATH	125*		
MATH	130*		
MATH	135*		
Science			***20 hours***
BIOL	152*	BIOL	252*
BIOL	220*	CHEM	104, 111*
Social and Behavioral Science			***6 hours***
Missouri Constitution (3 hours)		***And 3 hours of the following:***	
HIST	106*	PSYC	101
PLSC	103*, 104*	SOC	101
Nursing Courses			***33 hours***
Level I courses (16 hours)			
ADN	167*	ADN	170*
ADN	169*	ADN	172*
ADN	163*	ADN	177*
or ADN	200* **LPNs Only**		
Level II courses (17 hours)			
ADN	260*	ADN	272*
ADN	263*	ADN	277*
ADN	267*	ADN	279*

*Prerequisite requirement

Suggested Plan of Study

Based On Acceptance to the Program

Program Prerequisites: Anatomy & Physiology I (BIOL 152) – 5 credit hours
Active CNA or EMT certification or Paramedic license
All general education courses must be completed by both Level I & Level II students.

First Semester			***Hours***
ADN	163	Nursing Concepts I	3
ADN	167	Clinical I	1
ADN	169	Nursing Interventions I	3
BIOL	252	Human A&P II	5
COLL	101	College Orientation	1
Approved Mathematics Course			3
		Total	**16**

Second Semester			***Hours***
ADN	172	Family Development	2
ADN	177	Clinical II	3
ADN	170	Nursing Interventions II	4
BIOL	220	General Microbiology	5
PSYC	101	Gen Psych – OR – SOC 101	3
		Total	**17**

Third Semester			***Hours***
ADN	267	Clinical III	3
ADN	260	Nursing Interventions III	4
ADN	263	Nursing Concepts II	2
CHEM	104	– OR – CHEM 111	5
COMM	104	Fundamentals of Speech	3
		Total	**17**

Fourth Semester			***Hours***
ADN	279	Nursing Interventions IV	3
ADN	272	Psychosocial Nursing	2
ADN	277	Clinical IV	3
ENGL	101	English Composition	3
HIST	106	– OR – PLSC 103	3
Approved Humanities Course			3
		Total	**17**

TOTAL HOURS REQUIRED **72**

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)		***Oral Communications (3 hours)***	
ENGL	101* (3)	COMM 104* (3)	
Humanities			***3 hours***
ART	101	MUSC 101	
ASL	101, 102*	PHIL 101*. 110*, 121, 201*, 202*	
ENGL	109, 120, 125	SPAN 101, 111	
FREN	101	SWK 219	
HIST	101*	TA 205	
Mathematics			***3 hours***
MATH	125*, 130*, 135*		
Office Administration			***3 hours***
OA	215		
Science			***10 hours***
BIOL	152*		
BIOL	252*		
Social and Behavioral Science			***6 hours***
PSYC	101		
Missouri Constitution (3 hours)			
PLSC	103*, 104*		
HIST	106*		
OTA Courses			***41 hours***
OTA	101	OTA 211*	
OTA	111	OTA 221*	
OTA	116	OTA 236*	
OTA	131*	OTA 240*	
OTA	140*	OTA 250*	
OTA	201*		

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
OA	215	Medical Terminology	3
OTA	101	Prins of Occupational Therapy	2
OTA	111	Occ Performance	3
OTA	116	Prins of Therapeutic Intervention	3
		TOTAL	**16**

Summer Semester			***Hours***
HIST	106	US History – OR – PLSC 103	3
Approved Mathematics Course			3
		TOTAL	**6**

SECOND YEAR

Fall Semester			***Hours***
OTA	131	Functional Mvmt: Occ & Adaptation	3
OTA	140	Occ Therapy Trends & Issues	2
OTA	201	Practice: Children & Adolescents	5
Approved Humanities Course			3
		TOTAL	**13**

Spring Semester			***Hours***
OTA	211	Practice: Mental Health	5
OTA	221	Practice: Physical Rehabilitation	5
OTA	236	Occ Perf Issues in Later Adulthood	3
		TOTAL	**13**

THIRD YEAR

Fall Semester			***Hours***
OTA	240	Fieldwork level II A	5
OTA	250	Fieldwork level II B	5
		TOTAL	**10**

TOTAL HOURS REQUIRED 73

*Prerequisite required

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*	**OR**	ENGL 104*
Oral Communications (3 hours)			
COMM	104*		
Mathematics			***3 hours***
MATH	125*, 130*, 135*		
Missouri Constitution			***3 hours***
PLSC	103*, 104*		
HIST	106*		
Science			***10 hours***
BIOL	101, 152*		
CHEM	101		
CHEM	104 (Recommended)		
Office Administration Courses			***3 hours***
OA	215 (3)		

*Prerequisite requirement

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
EMTP	225	EMT – Paramedic (1st 8 weeks)	9
EMTP	230	EMT – Paramedic (2nd 8 weeks)	9
		TOTAL	**18**

Spring Semester			***Hours***
EMTP	235	EMT – Paramedic (1st 8 weeks)	9
EMTP	240	EMT – Paramedic (2nd 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***
COLL	101	College Orientation	1
ENGL	101	English Composition I	3
BIOL	101	– OR – BIOL 152	5
OA	215	Medical Terminology	3
EMTP	250	EMT – Paramedic Capstone (Optional)	6
Approved Mathematics Course			3
		TOTAL	**15-21**

Spring Semester			***Hours***
ENGL	102	– OR – ENGL 203	3
CHEM	104	Chemistry for Health Sciences	5
COMM	104	Fundamentals of Speech	3
HIST	106	– OR – PLSC 103, 104	3
EMTP	250	EMT – Paramedic Capstone (Optional)	6
		TOTAL	**14-20**

Graduate with Paramedical Science AAS

Total Paramedic Certificate Hours Required	**42**
Additional Hours Needed for AAS	**29**
Total AAS Hours Required	**71**

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	

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* ***OR*** ENGL 104*

Oral Communications (3 hours)

COMM 104*

Humanities — ***9 hours***

Fine Arts (3 hours)	***Additional Humanities (3 hours)***
ART 101	ENGL 109, 120, 125
	FREN 101
Literature (3 hours)	HIST 101*
ENGL 109, 120, 125	MUSC 101
	PHIL 101*, 110*, 121, 201*, 202*
	SPAN 101
	SWK 219
	TA 205

Mathematics — ***3 hours***

MATH 125*

Physical Education — ***2 hours***

PE 113

OR two of the following:

PE 102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144,145, 204*, 205*, 216*, 244*, 245*

Science — ***10 hours***

Biological Science (5 hours)	***Physical Science (5 hours)***
BIOL 101	CHEM 101, 104, 111*
	GEOL 115
	PHYS 101, 190*

Social and Behavioral Science — ***9 hours***

Missouri Constitution (3 hours)	***Additional 3 Hours***
HIST 106*	ECON 201*, 202*
PLSC 103*, 104*	GEOG 111
And 3 Hours	HIST 101*, 102*, 106*, 107*
ECON 201*, 202*	PHIL 110*, 121
GEOG 111	PLSC 103*, 104*, 205
HIST 101*, 102*, 107*	PSYC 101, 210*, 215*
PHIL 121	SOC 101
PSYC 101	
SOC 101	

Major Courses — ***18 hours***

Required Courses (9 hours)

ART 191 Graphic Design II (3)	COMM 231* Photocomm II (3)
COMM 220 Photocomm I (3)	

Approved Electives (9 Hours)

ART 103	COMM 150*
BSAD 150	COMM 171-173
BMGT 200	COMM 225*
COMM 111*	

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***
BIOL	101	Biology	5
HIST	106	– OR – PLSC 103	3
Approved Literature Course			3
Approved Photography Elective			3
Approved Physical Education Activity			1
		TOTAL	**15**

Spring Semester	**Hours**
Approved Humanities Course	3
Approved Photography Elective	3
Approved Physical Education Activity	1
Approved Physical Science Course	5
Approved Social Science 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.

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* ***OR***	ENGL	104*
Oral Communications (3 hours)			
COMM	104*		
Humanities			***9 hours***
Fine Arts (3 hours)		***Additional Humanities (3 hours)***	
ART	101	ART	101
MUSC	101	ASL	101, 102*
TA	205	ENGL	109, 120, 125
Literature (3 hours)		HIST	101*
ENGL	109, 120, 125	MUSC	101
		PHIL	101*, 110*, 121, 201*, 202*
		SWK	219
		TA	205
Mathematics			***3 hours***
MATH	125*		
Physical Education			***2 hours***
PE	113		
Science			***10 hours***
Biological Science (5 hours)		***Physical Science (5 hours)***	
BIOL	101	CHEM	101, 104, 111*
		PHYS	101 (recommended)
Social and Behavioral Science			***9 hours***
Missouri Constitution (3 hours)		***Additional (6 Hours)***	
PLSC	103*, 104*	HIST	106*
		PSYC	101
Major Courses			***12 hours***
PE	115	PE	142
PE	120	PE	150
PE	125	PE	160 **OR** 260
PE Activities Classes (2 one hour classes maximum)			
Approved Electives			***6-11 hours***
PSYC	210*	EDUC	230* (recommended)
PSYC	215*	BIOL	152* (recommended)

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 Fine Arts Course			3
		TOTAL	**15**

Spring Semester			***Hours***
BIOL	101	General Biology	5
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	**16**

SECOND YEAR

Fall Semester			***Hours***
ENGL	109	Intro to Literature	3
PE	120	Intro to PE (Fall Only)	2
PE	150	Sports Psychology (Fall Only)	2
PHYS	101	Survey of Phys. Science	5
EDUC	230	Educational Psychology	3
		TOTAL	**15**

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 Elective			3
Approved Humanities Course			3
		TOTAL	**16**

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.

Physical Sciences 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* ***OR*** ENGL 104*

Oral Communications (3 hours)

COMM 104*

Humanities — ***9 hours***

Fine Arts (3 hours)		***Additional Humanities (3 hours)***	
ART	101	ART	101
MUSC	101	ASL	101, 102*
TA	205	ENGL	109, 120, 125
		FREN	101
Literature (3 hours)		HIST	101*
ENGL	109, 120, 125	MUSC	101
		PHIL	101*, 110*, 121, 201*, 202*
		SPAN	101
		SWK	219
		TA	205

Mathematics — ***5 hours***

MATH 150* & 160*

Physical Education — ***2 hours***

PE 113

OR two of the following:

PE 102, 103, 104, 105, 110, 111, 114, 116, 117, 118,144, 145, 204*, 205*, 216*, 244*, 245*

Science — ***10 hours***

Biological Science (5 hours)		***Physical Science (5 hours)***	
BIOL	101	CHEM	111*

Social and Behavioral Science — ***9 hours***

Missouri Constitution (3 hrs)		***Additional 3 Hours***	
HIST	106*	ECON	201*, 202*
PLSC	103*, 104*	GEOG	111
And 3 Hours		HIST	101*, 102*, 106*, 107*
ECON	201*, 202*	PHIL	110*, 121
GEOG	111	PLSC	103*, 104*, 205*
HIST	101*, 102*, 107*	PSYC	101, 210*, 215*
PHIL	121	SOC	101
PSYC	101		
SOC	101		

Major Courses — ***20 hours***

CHEM	112*	PHYS	190*
MATH	201*	PHYS	210*

Additional Recommended Courses

COMP	111*	MATH	202*
GEOL	115		

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
HIST	106	– OR – PLSC 103, 104	3
MATH	150	Calculus I, Part 1	2
		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 Fine Arts Course			3
Approved Soc & Behavioral Science Course			3
		TOTAL	**16**

Spring Semester			***Hours***
BIOL	101	General Biology	5
Approved Physical Educations Activity			2
Approved Literature Course			3
Approved Humanities Course			3
Approved Soc & Behavioral Science Course			3
		TOTAL	**16**

TOTAL HOURS REQUIRED 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.

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* ***OR***	ENGL	104*
Oral Communications (3 hours)			
COMM	104*		
Humanities			***9 hours***
Fine Arts (3 hours)		***Additional Humanities (3 hours)***	
ART	101	ART	101
MUSC	101	ASL	101, 102*
TA	205	ENGL	109, 120, 125
		FREN	101
Literature (3 hours)		HIST	101*
ENGL	109, 120, 125	MUSC	101
		PHIL	101*, 110*, 121, 201*, 202*
		SPAN	101
		SWK	219
		TA	205
Mathematics			***5 hours***
MATH	150* & 160*		
Physical Education			***2 hours***
PE	113	***OR two of the following:***	
		PE	102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*
Science			***10 hours***
Biological Science (5 hours)		***Physical Science (5 hours)***	
BIOL	101	PHYS	190*
Social and Behavioral Science			***9 hours***
Missouri Constitution (3 hours)		***Additional 3 Hours***	
HIST	106*	ECON	201*, 202*
PLSC	103*, 104*	GEOG	111
And 3 Hours		HIST	101*, 102*, 106*, 107*
ECON	201*, 202*	PHIL	110*, 121
GEOG	111	PLSC	103*, 104*, 205*
HIST	101*, 102*, 107*	PSYC	101, 210*, 215*
PHIL	121	SOC	101
PSYC	101		
SOC	101		
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			

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
HIST	106	– OR – PLSC 103, 104	3
MATH	150	Calculus I, Part 1	2
		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 Fine Arts Course			3
Approved Physical Education Activity			2
		TOTAL	**16**

SECOND YEAR

Fall Semester			***Hours***
MATH	201	Calculus II	5
PHYS	210	General Physics II	5
Approved Literature Course			3
Approved Soc & Behavioral Science Course			3
		TOTAL	**16**

Spring Semester			***Hours***
BIOL	101	General Biology	5
MATH	202	Calculus III	5
MATH	210	Differential Equations	3
Approved Humanities Course			3
Approved Soc & Behavioral Science Course			3
		TOTAL	**19**

TOTAL HOURS REQUIRED 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.

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. The A.S. Pre-Engineering Alternative Energy Option degree is designed for those students who wish to pursue a career in alternative energies. Grades below a "C" are not allowed.

Program of Study

Orientation			***1 hour***
COLL	101		
Communications †			***6 hours***
ENGL	101* (3)		
ENGL	102* (3) **OR**	ENGL	104* (3)
COMM	104* (3)		
Humanities, Social and Behavioral Science †			***12 hours***
Missouri Constitution (3 hours)		***Economics (3 hours):***	
PLSC	103*, 104*	ECON	201*, 202*
HIST	106*		
Humanities (3 hours)		***Additional (3 hours) or another humanities***	
ART	101		
ASL	101, 102*	ECON	201*, 202*
ENGL	109, 120, 125	GEOG	111
HIST	101*	HIST	101*, 102*, 106*, 107*
MUSC	101	PHIL	110*, 121
PHIL	101*, 110*, 121, 201*, 202*	PLSC	103*, 104*
SPAN	101	PSYC	101
SWK	219	SOC	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
Computer Science			***4 hours***
COMP	111*		
Technical Electives			***6 hours***
CHEM	112*	DRFT	101
CHEM	201*	DRFT	115
Alternative Energy Courses			

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***
HIST	106	US History – OR – PLSC 103	3
MATH	201	Calculus II	5
PHYS	210	General Physics II	5
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			6
		Total	**17**

TOTAL HOURS REQUIRED 65

*Prerequisite requirement

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 SCIENCE DEGREE

Pre-Engineering – Alternative Energy Option 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. The A.S. Pre-Engineering Alternative Energy Option degree is designed for those students who wish to pursue a career in alternative energies. Grades below a "C" are not allowed.

Program of Study

Orientation				***1 hour***
COLL	101			
Communications				***6 hours***
ENGL	101*			
ENGL	102*	**OR**	ENGL	104* (3)
COMM	104*			
Humanities, Social and Behavioral Science †				***12 hours***
Missouri Constitution (3 hours)		***Economics (3 hours):***		
PLSC	103*, 104*	ECON	201*, 202*	
HIST	106*			
Humanities (3 hours)		***Additional humanities (3 hours)***		
ART	101	ECON	201*, 202*	
ASL	101, 102*	GEOG	111	
ENGL	109, 120, 125	HIST	101*, 102*, 106*, 107*	
HIST	101*	PHIL	110*, 121	
MUSC	101	PLSC	103*, 104*	
PHIL	101*, 110*, 121, 201*, 202*	PSYC	101	
SPAN	101	SOC	101	
SWK	219			
TA	205			
Mathematics				***18 hours***
MATH	150*	MATH	202*	
MATH	160*	MATH	210*	
MATH	201*			
Science				***18 hours***
PHYS	190*	CHEM	111	
PHYS	210*			
PHYS	250*			
Computer Science				***4 hours***
COMP	111*			
Technical Electives				***6 hours***
ENER	142	ENER	220*	
ENER	144*	ENER	232*	
ENER	200*	ENER	256, 257, 258	
ENER	210*			

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***
HIST	106	US History – OR – PLSC 103	3
MATH	201	Calculus II	5
PHYS	210	General Physics II	5
Approved Humanities Course			3
		Total	**16**

Spring Semester			***Hours***
MATH	202	Calculus III	5
MATH	210	Differential Equations	3
PHYS	250	Statics	3
Approved Technical Electives			6
		Total	**17**

TOTAL HOURS REQUIRED 65

*Prerequisite requirement

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.

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 insure 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*	***OR***	ENGL 104*
Oral Communications (3 hours)			
COMM	104*		
Humanities			***9 hours***
Fine Arts (3 hours)		***Additional Humanities (3 hours)***	
ART	101	ART	101
MUSC	101	ENGL	109, 120, 125
TA	205	FREN	101
Literature (3 hours)		HIST	101*
ENGL	109, 120, 125	MUSC	101
		PHIL	101*, 110*, 121, 201*, 202*
		SPAN	101
		SWK	219
		TA	205
Mathematics			***5 hours***
MATH	150* & 160*		
Physical Education			***2 hours***
PE	113	***OR two of the following:***	
		PE	102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*
Science			***10 hours***
Biological Science (5 hours)		***Physical Science (5 hours)***	
BIOL	101	CHEM	111*
BIOL	110*		
Social and Behavioral Science			***9 hours***
Missouri Constitution (3 hrs)		***Additional 3 Hours***	
HIST	106*	ECON	201*, 202*
PLSC	103*, 104*	GEOG	111
And 3 Hours		HIST	101*, 102*, 106*, 107*
ECON	201*, 202*	PHIL	110*, 121
GEOG	111	PLSC	103*, 104*, 205*
HIST	101*, 102*, 107*	PSYC	101, 210*, 215*
PHIL	121	SOC	101
PSYC	101		
SOC	101		
Major Courses			***20 hours***
Required Courses (10 hours)			
PHYS	190*	BIOL	220*
Approved Electives (10 hours)			
CHEM	112*	CHEM	221*
CHEM	201*	PHYS	210*

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
BIOL	101	Biology	5
CHEM	111	General Chemistry I	5
COLL	101	College Orientation	1
ENGL	101	English Composition I	3
MATH	150	Calculus 1, Part I	2
		TOTAL	**16**

Spring Semester			***Hours***
CHEM	112	General Chemistry II	5
HIST	106	– OR – PLSC 103, 104	3
MATH	160	Calculus 1, Part II	3
Approved Fine Arts Course			3
Approved Soc & Behavioral Science Course			3
		TOTAL	**17**

SECOND YEAR

Fall Semester			***Hours***
BIOL	110	– OR – Approved elective	5
BIOL	220	General Microbiology	5
ENGL	102	English Composition II	3
Approved Literature Course			3
		TOTAL	**16**

Spring Semester			***Hours***
COMM	104	Fundamentals of Speech	3
PE	113	Lifetime Wellness	2
PHYS	190	General Physics I	5
Approved Humanities Course			3
Approved Soc & Behavioral Science Course			3
		TOTAL	**16**

TOTAL HOURS REQUIRED 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.

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 include courses that are transferable to several four-year institutions in our area.

Program of Study

Orientation			***1 hour***
COLL 101			
Communications			***9 hours***
Written Communications (6 hours)			
ENGL 101*			
ENGL 102*	***OR***	ENGL 104*	
Oral Communications (3 hours)			
COMM 104*			
Humanities			***9 hours***
Fine Arts (3 hours)		***Additional Humanities (3 hours)***	
ART 101		ART 101	
MUSC 101		ASL 101, 102*	
		ENGL 109, 120, 125	
		FREN 101	
Literature (3 hours)		HIST 101*	
ENGL 109, 120, 125		MUSC 101	
		PHIL 101*, 110*, 121, 201*, 202*	
		SPAN 101	
		SWK 219	
		TA 205	
Mathematics			***3 hours***
MATH 125*			
Physical Education			***2 hours***
PE 113 **(recommended)**		***OR two of the following:***	
		PE 102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*	
Science			***10 hours***
Biological Science (5 hours)		***Physical Science (5 hours)***	
BIOL 101		PHYS 101	
Social and Behavioral Science			***9 hours***
PLSC 103*, 104*	***OR***	HIST 106*	
PSYC 101			
SOC 101			
Major Courses		***18 hours from the following***	
ECD 101 or EDUC 204		PSYC 203	
ECD 103		PSYC 204	
ECD 201*		PSYC 210*	
ECD 203* or EDUC 251		PSYC 211*	
EDUC 206*		PSYC 290	

Students with the Child Development Associate (CDA) national credential will be credited with completing ECD 101 and ECD 103.

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
BIOL	101	General Biology	5
COLL	101	College Orientation	1
ENGL	101	English Composition I	3
PSYC	101	General Psychology	3
Major Course			3
		TOTAL	**15**

Spring Semester			***Hours***
ENGL	102	English Composition II	3
HIST	106	– OR – PLSC 103,104	3
MATH	125	Quantitative Reasoning	3
PE	113	Lifetime Fit and Wellness	2
SOC	101	General Sociology	3
Major Course			3
		TOTAL	**17**

SECOND YEAR

Fall Semester			***Hours***
COMM	104	Fundamentals of Speech	3
PHYS	101	Survey of Physical Science	5
Approved Literature Course			3
Major Course			3
		TOTAL	**14**

Spring Semester	***Hours***
Approved Fine Arts Course	3
Approved Humanities Course	3
Major Course	3
Major Course	3
Major Course	3
TOTAL	**15**

TOTAL HOURS REQUIRED 61

*Prerequisite required

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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 Ag Career Development

Communications — ***9 hours***

Written Communications (6 hours)

ENGL	101*			
ENGL	102*	***OR***	ENGL	104*

Oral Communications (3 hours)

COMM	104*

Humanities — ***9 hours***

Fine Arts (3 hours)		***Additional Humanities (3 hours)***	
ART	101	ART	101
MUSC	101	ASL	101, 102*
TA	205	ENGL	109, 120, 125
		FREN	101
Literature (3 hours)		HIST	101*
ENGL	109, 120, 125	MUSC	101
		PHIL	101*, 110*, 121, 201*, 202*
		SPAN	101
		SWK	219
		TA	205

Mathematics — ***6 hours***

MATH	112* & 135*

Physical Education — ***2 hours***

PE	113	***OR two of the following:***	
		PE	102, 103, 104, 105, 110, 111, 114, 116, 117, 118,144, 145, 204*, 205*, 216*, 244*, 245*

Science — ***10 hours***

Biological Science (5 hours)		***Physical Science (5 hours)***	
BIOL	110*	CHEM	111*

Social and Behavioral Science — ***9 hours***

Missouri Constitution (3 hrs)		***Additional 3 Hours***	
HIST	106*	ECON	201*, 202*
PLSC	103*, 104*	GEOG	111
And 3 Hours		HIST	101*, 102*, 106*, 107*
ECON	201*, 202*	PHIL	110*, 121
GEOG	111	PLSC	103*, 104*, 205*
HIST	101*, 102*, 107*	PSYC	101, 210*, 215*
PHIL	121	SOC	101
PSYC	101		
SOC	101		

Major Courses — ***20 hours***

Required Courses (14 hours)

ANSC	114	CHEM	112*
BIOL	220*		

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*

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
		TOTAL	**16**

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***
CHEM	111	General Chemistry I	5
PE	113	Lifetime Wellness	2
Approved Elective(s)			3-5
Approved Fine Arts Course			3
Approved Soc & Behavioral Science Course			3
		TOTAL	**16-18**

Spring Semester			***Hours***
CHEM	112	General Chemistry II	5
HIST	106	– OR – PLSC 103	3
Approved Humanities Course			3
Approved Literature Course			3
Approved Soc & Behavioral Science Course			3
		TOTAL	**17**

TOTAL HOURS REQUIRED 66-70

*Prerequisite required

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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* ***OR*** ENGL 104*

Oral Communications (3 hours)

COMM 104*

Humanities — ***9 hours***

Fine Arts (3 hours)	***Additional Humanities (3 hours)***
ART 101	ART 101
MUSC 101	ASL 101, 102*
TA 205	ENGL 109, 120, 125
	FREN 101
Literature (3 hours)	HIST 101*
ENGL 109, 120, 125	MUSC 101
	PHIL 101*, 110*, 121, 201*, 202*
	SPAN 101
	SWK 219
	TA 205

Mathematics — ***3 hours***

MATH 135*

Physical Education — ***2 hours***

PE 113 ***OR two of the following:***

PE 102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*

Science — ***10 hours***

Biological Science (5 hours)	***Physical Science (5 hours)***
BIOL 101	CHEM 101, 104, 111*
	GEOL 115
	PHYS 101, 190*

Social and Behavioral Science — ***9 hours***

Missouri Constitution (3 hours)	**Additional 3 Hours**
HIST 106*	ECON 201*, 202*
PLSC 103*, 104*	GEOG 111
And 3 Hours	HIST 101*, 102*, 106*, 107*
ECON 201*, 202*	PHIL 110*, 121
GEOG 111	PLSC 103*, 104*, 205*
HIST 101*, 102*, 107*	
PHIL 121	

Major Courses — ***18 hours***

Required Courses (9 hours)

PSYC 101	SOC 101
PSYC 211	

Approved Electives (9 hours)

EDUC 231*	PSYC 204
HIST 106*	PSYC 210*
HIST 107*	PSYC 215*
PLSC 103*, 104*	PSYC 290*
PSYC 110*	SOC 103*
PSYC 203	

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	– OR – PLSC 103, 104	3
MATH	135	Algebra for Calculus	3
PSYC	101	General Psychology	3
		TOTAL	**16**

Spring Semester			***Hours***
BIOL	101	General Biology	5
ENGL	102	English Composition II	3
SOC	101	General Sociology	3
Approved Fine Arts Course			3
Approved Social & Behavioral Science Course			3
		TOTAL	**17**

SECOND YEAR

Fall Semester			***Hours***
PSYC	211	Lifespan Development	3
Approved Physical Science Course			5
Approved Psychology Elective			3
Approved Social & Behavioral Science			3
		TOTAL	**14**

Spring Semester			***Hours***
PE	113	Lifetime Fit and Wellness	2
Approved Additional Humanity			3
Approved Literature Course			3
Approved Psychology Elective			3
Approved Psychology Elective			3
		TOTAL	**14**

TOTAL HOURS REQUIRED 61

*Prerequisite required

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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*	***OR*** ENGL	104*
Oral Communications (3 hours)			
COMM	104*		
Humanities			***9 hours***
Fine Arts (3 hours)		***Additional Humanities (3 hours)***	
ART	101	ART	101
MUSC	101	ASL	101, 102*
TA	205	ENGL	109, 120, 125
		FREN	101
Literature (3 hours)		HIST	101*
ENGL	109, 120, 125	MUSC	101
		PHIL	101*, 110*, 121, 201*, 202*
		SPAN	101
		TA	205
Mathematics			***3 hours***
MATH	125*		
Physical Education			***2 hours***
PE	113	***OR two of the following:***	
		PE	102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*
Science			***10 hours***
Biological Science (5 hours)		***Physical Science (5 hours)***	
BIOL	101	CHEM	101, 104, 111*
		GEOL	115
		PHYS	101, 190*
Social and Behavioral Science			***6 hours***
Missouri Constitution (3 hours)		***Additional Courses (3 hours)***	
HIST	106*	PLSC	103*, 104*
Major Courses			***21 hours***
ECON	201*	SWK	200*
PSYC	101	SWK	219
SOC	101	SWK	221
		SWK	230

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***
BIOL	101	General Biology	5
ENGL	102	English Composition II	3
HIST	106	US History I	3
SWK	221	Basic Helping Skills	3
		TOTAL	**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 Literature Course			3
Approved Physical Science Course			5
		TOTAL	**17**

Spring Semester			***Hours***
PE	113	Lifetime Fit and Wellness	2
PLSC	103	Nat'l, State, Local Gov't	3
SWK	219	Human Diversity	3
Approved Fine Arts Course			3
Approved Humanities Course			3
		TOTAL	**14**

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.

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*	***OR***	ENGL	104*
Oral Communications (3 hours)			
COMM 104*			
Humanities			***9 hours***
Fine Arts (3 hours)		***Additional Humanities (3 hours)***	
ART 101		ART	101
MUSC 101		ASL	101, 102*
TA 205		ENGL	109, 120, 125
Literature (3 hours)		MUSC	101
ENGL 120 – OR – 125		PHIL	101*, 110*, 121, 201*, 202*
		SWK	219
		TA	205
Mathematics			***3 hours***
MATH 125*			
Physical Education			***2 hours***
PE 113	***OR two of the following:***		
	PE	102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*	
Science			***10 hours***
Biological Science (5 hours)		***Physical Science (5 hours)***	
BIOL 101		CHEM	101, 104, 111*
		GEOL	115
		PHYS	101, 190*
Social and Behavioral Science			***9 hours***
Missouri Constitution (3 hours)		***Additional 3 hours***	
HIST 106*		ECON	201*, 202*
PLSC 103*, 104*		GEOG	111
Social Science Courses (3 hrs)		HIST	102*, 107*
HIST 101*		PHIL	110*, 121
		PLSC	103*, 104*, 205*
		PSYC	101, 210*, 215*
		SOC	101
Major Courses			***18 hours***
Required Courses (12 hours)			
SPAN 101		SPAN	201*
SPAN 102*		SPAN	202*
Approved Electives (6 hours)			
HIST 102*		SPAN	105*
SWK 219		SPAN	106*
		SPAN	111*

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	3
Approved Fine Arts Course			3
		TOTAL	**16**

Spring Semester			***Hours***
ENGL	102	Advanced English Comp	3
HIST	106	– OR – PLSC 103,104	3
SPAN	102	Beginning Spanish II	3
Approved Humanities Course			3
Approved Soc & Behavioral Science Course			3
		TOTAL	**15**

SECOND YEAR

Fall Semester			***Hours***
SPAN	201	Intermediate Spanish I	3
Approved Elective			3
Approved Literature Course			3
Approved Physical Education Activity			1
Approved Science Course			5
		TOTAL	**15**

Spring Semester			***Hours***
HIST	101	Western Civilization	3
SPAN	202	Intermediate Spanish II	3
Approved Elective			3
Approved Physical Education Activity			1
Approved Science course			5
		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.

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, 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. Because GPA and MoGEA 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 register with FCSR and have a clearance 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* ***OR*** ENGL 104*

Oral Communications (3 hours)

COMM 104*

Humanities ***9 hours***

Fine Arts (3 hours)	***Additional Humanities (3 hours)***
ART 101	ART 101
MUSC 101	ASL 101, 102*
	ENGL 109, 120, 125
Literature (3 hours)	FREN 101
ENGL 109, 120, 125	HIST 101*
	MUSC 101
	PHIL 101*, 110*, 121, 201*, 202*
	SPAN 101
	SWK 219
	TA 205

Mathematics ***3 hours***

MATH 125*

Physical Education ***2 hours***

PE 113 (recommended) ***OR two of the following:***

PE 102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*

Science ***10 hours***

Biological Science (5 hours)	***Physical Science (5 hours)***
BIOL 101	CHEM 101, 111*
	GEOL 115
	PHYS 101 (Elementary majors)

Social and Behavioral Science ***9 hours***

HIST 106*, 107*	PSYC 101
PLSC 103*, 104*	

Major Courses ***19 hours***

Required Courses (13 hours)

EDUC 150	EDUC 231*
EDUC 204*	EDUC 251*
EDUC 212*	

Electives (6 hours) (Check with advisor)

ECON 201*	PSYC 204
EDUC 205	PSYC 210*
EDUC 206	PSYC 211* (MSU students)
GEOG 111	PSYC 215*
GEOL 210*	

Any content specific courses for Middle School or HS certification

Students must pass the MoGEA with a DESE approved score in each section.

Overall GPA of 2.75 is required

Suggested Plan of Study

FIRST YEAR

Fall Semester			***Hours***
BIOL	101	General Biology	5
COLL	101	College Orientation	1
EDUC	150	Intro to Teacher Education	1
EDUC	204	Foundations of Ed in a Diverse Society	3
ENGL	101	English Composition I	3
PSYC	101	General Psychology	3
		TOTAL	**16**

Spring Semester			***Hours***
COMM	104	Fundamentals of Speech	3
EDUC	212	Educational Technology	3
ENGL	102	English Composition II	3
HIST	107	– OR – HIST 106	3
MATH	125	Quantitative Reasoning	3
PE	113	Lifetime Fit and Wellness	2
		TOTAL	**17**

SECOND YEAR

Fall Semester			***Hours***
EDUC	231	Educational Psychology	3
PLSC	103	Nat'l, State, Local Gov't	3
Approved Literature Course			3
Approved Physical Science Course			5
		TOTAL	**14**

Spring Semester			***Hours***
EDUC	251	Teaching Prof w/Field Exp	3
Approved Fine Arts Course			3
Approved Humanities Course			3
Approved Education Elective			3
Approved Education Elective			3
		TOTAL	**15**

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.

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*	***OR***	ENGL 104*
Oral Communications (3 hours)			
COMM	104*		
Humanities			***9 hours***
Fine Arts (3 hours)		***Additional Humanities (3 hours)***	
ART	101	ART	101
MUSC	101	ASL	101, 102*
TA	205	ENGL	109, 120, 125
Literature (3 hours)		FREN	101
ENGL	109, 120, 125	HIST	101*
		MUSC	101
		PHIL	101*, 110*, 121, 201*, 202*
		SPAN	101
		SWK	219
		TA	205
Mathematics			***3 hours***
MATH	125*		
Physical Education			***2 hours***
PE	113	***OR two of the following:***	
		PE	102, 103, 104, 105, 110, 111, 114, 116, 117, 118, 144, 145, 204*, 205*, 216*, 244*, 245*
Science			***10 hours***
Biological Science (5 hours)		***Physical Science (5 hours)***	
BIOL	101	CHEM	101, 104, 111*
		GEOL	115
		PHYS	101, 190*
Social and Behavioral Science			***9 hours***
Missouri Constitution (3 hours)		***Additional 3 hours***	
HIST	106*	ECON	201*, 202*
PLSC	103*, 104*	GEOG	111
And 3 Hours		HIST	101*, 102*, 106*, 107*
ECON	201*, 202*	PHIL	110*, 121
GEOG	111	PLSC	103*, 104*, 205*
HIST	101*, 102*, 107*	PSYC	101, 210*, 215*
PHIL	121	SOC	101
PSYC	101		
SOC	101		
Major Courses			***12 hours***
TA	105	TA	208
TA	115	TA	Theatre Practicum
Approved Electives			***8 hours***
MUSC	112*	TA	180
TA	108	TA	Theatre Practicum
TA	112	TA	Topics in Theatre
TA	125, 225		

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***
BIOL	101	General Biology	5
ENGL	102	English Composition II	3
HIST	106	– OR – PLSC 103, 104	3
TA	107/117	Theatre Practicum (Performance or Technical)	1
TA	115	Stagecraft (Spring only)	3
		TOTAL	**15**

SECOND YEAR

Fall Semester			***Hours***
TA	206/216	Theatre Practicum (Performance or Technical)	1
TA	180	Stage Makeup or other elective	3
Approved Physical Science Course			5
Approved Soc & Behavioral Science Course			3
Approved Theatre Elective			3
		TOTAL	**15**

Spring Semester			***Hours***
PE	113	Lifetime Fit and Wellness	2
TA	208	Scene Work	3
Approved Humanities Course			3
Approved Literature Course			3
Approved Soc & Behavioral Science Course			3
Approved Theatre Elective			2
		TOTAL	**16**

TOTAL HOURS REQUIRED 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.

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 in April 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 20 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*			
Missouri Constitution				***3 hours***
PLSC	103*, 104*	**OR**	HIST	106*
Science				***15 hours***
BIOL	101 (5)	**OR**	BIOL	110* (5)
BIOL	220* (5)			
CHEM	104 (5)	**OR**	CHEM	101, 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)
Total Hourly Requirement				***78 hours***

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	5
MATH	135	Algebra for Calculus	3
		TOTAL	**13**

Spring Semester			***Hours***
AGEC	223	Ag Computer Applications	3
ANSC	180	Intro to Veterinary Science	2
CHEM	104	Chemistry for Health Sciences	5
ENGL	101	English Composition I	3
		TOTAL	**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
HIST	106	– OR – PLSC 103	3
VETC	120	Veterinary Hospital Technology I	3
VETC	130	Clinical Pathology I	3
VETC	285	Vet Tech Clinical Experience I	1
		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 78

*Prerequisite requirement

CERTIFICATE TO AAS

Welding: AMT – Welding Certificate (Pipe & Plate)

Welding: AMT – Welding Certificate (Pipe & Plate & Fabrication)

Welding: Advanced Manufacturing Technology (AMT) – Welding 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 classes 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 Welding Option.

The Pipe & Plate and Pipe & Plate & Fabrication 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 course 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

Pipe & Plate Courses			***31 hours***
WELD	117	Blue Print Reading (2)	
WELD	151	Welding Theory I (2)	
WELD	152*	Welding Theory II (2)	
WELD	153*	Welding Lab I (5)	
WELD	154*	Welding Lab II (5)	
WELD	201*	Welding Theory III (2)	
WELD	202*	Welding Theory IV (2)	
WELD	211*	Welding Lab III (7)	
WELD	216*	Welding Lab IV Pipe/Plate (4)	
Pipe & Plate & Fab Courses			***15 hours***
CNS	105	& 106 Technical Career Development (2)	
DRFT	101	Intro to Eng Drwg and Print Reading (3)	
WELD	124	Fabrication Methods I (2)	
WELD	135	Basic Metallurgy (2)	
WELD	140*	Fabrication Methods II (2)	
WELD	213*	Welding Lab V Fabrication (4)	
Orientation			***1 hour***
COLL	101	College Orientation	
Communications			***9 hours***
Written Communications (6 hours)			
ENGL	101*		
ENGL	102*	– OR – ENGL 104*	
ENGL	203*		
Oral Communications (3 hours)			
COMM	104*		
Mathematics			***3 hours***
MATH	104*		
MATH	135*		
Missouri Constitution			***3 hours***
HIST	106*		
PLSC	103*, 104*		
Required Courses			***3 hours***
AMT	182	Introduction to Automated Robotics (3)	

*Prerequisite requirement

Suggested Plan of Study

Fall Semester			***Hours***
WELD	117	Blue Print Reading	2
WELD	135	Basic Metallurgy (PPF)	2
WELD	151	Welding Theory I	2
WELD	152	Welding Theory II	2
WELD	153	Welding Lab I	5
WELD	154	Welding Lab II	5
		TOTAL	**18**

Spring Semester			***Hours***
DRFT	101	Intro to Engineering Drawing (PPF)	3
WELD	201	Welding Theory III	2
WELD	202	Welding Theory IV	2
WELD	211	Welding Lab III	7
WELD	216	Welding Lab IV	4
		TOTAL	**18**

Graduate with AMT: Welding Pipe & Plate Certificate

SECOND YEAR

Fall Semester			***Hours***
CNS	105	CNS 105 & 106	2
WELD	124	Fabrication Methods I (PPF)	2
WELD	140	Fabrication Methods II (PPF)	2
WELD	213	Welding Lab V (Fabrication) (PPF)	4
Approved Written Communications Course			3
		TOTAL	**13**

Graduate with AMT: Welding Pipe, Plate, & Fab Certificate

Spring Semester			***Hours***
AMT	182	Intro to Automated Robotics	3
COLL	101	College Orientation	1
COMM	104	Fundamentals of Speech	3
HIST	106	US History – OR – PLSC 103	3
Approved Mathematics Course			3
Approved Written Communications Course			3
		TOTAL	**16**

Graduate with AMT: Welding Option AAS

Total P&P Certificate Hours Required	**31**
Additional Hours Needed for P&P&F Cert	**15**
Additional Hours Needed for AAS	**19**
Total AAS Hours Required	**65**

Courses for Certificate	
Additional Courses for AAS Degree	

CERTIFICATE

Welding: Electric Arc Welding Certificate

This certificate program prepares students for employment as entry-level welders using any one or all of the three basic types of Electric Arc Welding Technology: Gas Metal Arc Welding (GMAW), Gas Tungsten Arc Welding (GTAW) and/or Shielded Metal Arc Welding (SMAW). Students successfully completing this certificate program will be able to perform basic GMAW, GTAW, and SMAW tasks, read/interpret blueprints, complete basic math calculations, demonstrate basic computer/Internet skills, and communicate effectively.

Program of Study

Orientation			***1 hour***
COLL	101		
Major Courses			***12 hours***
WELD	113	Introduction to Welding (3)	
WELD	145*	Gas Metal Arc Welding (GMAW/MIG) (2)	
WELD	150*	Gas Tungsten Arc Welding (GTAW/TIG) (5)	
WELD	155*	Shielded Metal Arc Welding (SMAW) (5)	
Support Courses			***5-6 hours***
BSAD	115	Computer Concepts (3) – OR – BSAD 125	
DRFT	101	Intro to Eng Drawing (3) – OR – WELD 117* (2)	

*Prerequisite requirement

Suggested Plan of Study

First Semester			***Hours***
COLL	101	College Orientation	1
WELD	117	Blue Print Reading – OR – DRFT 101 (3)	2
WELD	113	Introduction to Welding	3
WELD	145	Gas Metal Arc Welding	3
		TOTAL	**9**

Second Semester			***Hours***
BSAD	115	Comp Concepts – OR – BSAD 125	3
WELD	150	Gas Tungsten Arc Welding	3
WELD	155	Shielded Metal Arc Welding	3
		TOTAL	**9**

TOTAL HOURS REQUIRED 18-19

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