



CLOUD COUNTY
Community College

ACADEMIC CATALOG

2023-2024



CLOUD COUNTY
Community College

CLLOUD COUNTY COMMUNITY COLLEGE

CONCORDIA CAMPUS

2221 Campus Drive
Concordia, Kansas 66901
785-243-1435
1-800-729-5101

GEARY COUNTY CAMPUS

631 Caroline
Junction City, Kansas 66441
785-238-8010

WWW.CLOUD.EDU

CATALOG 2023-2024



Cloud County Community College is accredited by The Higher Learning Commission, 230 South LaSalle Street, Suite 7-500, Chicago, IL, 60604, 800-621-7440.

Cloud County Community College operates under the authority of the Kansas Board of Regents, 1000 SW Jackson St., Suite 520, Topeka, KS, 66612-1368, 785-296-3421.

Although every reasonable effort has been made to ensure the information contained in this publication is accurate, Cloud County Community College reserves the right to make changes without notice.

Per veterans requirements: The College certifies that content and policies outlined in the 2023-2024 catalog are true and correct to the best of our knowledge.

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Board of Trustees

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Jim Koch
Patricia McFarlane

Richard Hubert
Mark Matthew
Jesse Pounds

Executive Leadership

Amber Knoettgen.....President
Dr. Kimberly Zant Vice-President for Academic Affairs
Caesar Wood.....Vice-President for Administrative Services
Brandt Hutchinson..... Vice-President for Student Services

Academic Divisions

Brenton Phillips.....Dean for Humanities, Social Sciences & Business
Don Benjamin.....Dean for Mathematics, Science & Technical Programs

Academic Calendar • 2023-2024

FALL SEMESTER, 2023

Aug 8	Student Services Day - GCC
Aug 10	Adjunct Faculty In-Service - GCC
Aug 11	Faculty Contract Day In-Service - Faculty & Staff Outreach Faculty In-Service - Concordia
Aug 13	Move-In Day - Concordia
Aug 14	Move-In Day (am) - Concordia
Aug 14-16	Faculty Contract Days
Aug 15	New Student Orientation - Concordia
Aug 16	Student Services Day -Concordia New Student Orientation - GCC
Aug 17	Classes begin - All campuses (Full Session & First Session)
Sep 4	Labor Day - COLLEGE CLOSED - No classes
Oct 5-6	Fall Break for Students - NO CLASSES Faculty Contract Days
Oct 5	In-Service - Faculty & Staff
Oct 9-10	Final Exams - 1st Session
Oct 9-12	Mid-Term Exams - Full Session Classes
Oct 16	2nd Session Begins
Nov 10	Veterans Day - COLLEGE CLOSED -No classes
Nov 22-24	Thanksgiving Break - COLLEGE CLOSED - No classes
Dec 11-12	Final Exams - 2nd Session Classes
Dec 11-14	Final Exams - Full Session
Dec 15	Faculty Contract Day
Dec 20-31	Winter Break - COLLEGE CLOSED - No Classes

WINTER TERM, 2023-2024

Dec 15	Winter Term Begins
Jan 12	Winter Term Ends

SPRING SEMESTER, 2024

Jan 1-2	Winter Break - COLLEGE CLOSED - No classes
Jan 9	Student Services Day - GCC
Jan 11	Adjunct Faculty In-Service - GCC
Jan 15	Martin Luther King Jr. Day - COLLEGE CLOSED
Jan 16	In-Service (am) - Faculty & Staff Faculty Contract Day
Jan 17	New Student Orientation - Concordia & GCC Student Services Day - Concordia Faculty Contract Day
Jan 18	Classes begin - All Locations (Full Session & First Session)
Feb 19	President's Day - COLLEGE CLOSED - No classes
Mar 4-7	Mid-Term Exams - Full Session
Mar 11-15	Spring Break - COLLEGE CLOSED - No classes
Mar 18-19	Final Exams - 1st Session
Mar 25	Second Session Begins
Mar 28	In-Service - No classes
Mar 29	Good Friday - COLLEGE CLOSED - No classes
May 15-16	Final Exams - 2nd Session

Academic Calendar • 2023-2024

May 13-16	Final Exams (Full Session)
May 17	Faculty Contract Day
May 17	Commencement - Concordia Campus for all graduates
May 22	Faculty Contract Day
May 27	Memorial Day - COLLEGE CLOSED -

SUMMER SESSION, 2024
(Classes held Monday-Thursday)
(College Closed on Fridays during June and July)

Jun 3	Summer Term Begins
Jul 4	Independence Day Observed- COLLEGE CLOSED - No classes
Jul 25	Summer Term Ends

Cloud County Community College prepares students to lead successful lives



General Information

LOCATIONS

The Concordia campus of Cloud County Community College is located in Concordia, a town with a population in excess of 5,000 in north central Kansas. Served by U.S. Highway 81, it is within easy driving distance of Salina, Manhattan, Junction City, Hays, Topeka, and Wichita. Highway 36, 24, 9 and Interstate 70 provide easy access to Concordia.

Concordia is a vibrant community with a rich history, featuring multiple historical attractions, and a thriving downtown, complete with a four-screen movie theatre, multiple restaurants, and the Broadway Plaza.

The Broadway Plaza is Concordia's premier outdoor public event space. Home to 100-150 events each year, the Plaza is the gateway to Concordia's downtown shopping, dining and entertainment district. With a giant LED screen to watch games and movies, a splash pad for kids, and a stage for concerts, the space entertains residents, neighbors and guests.

The famous Brown Grand Theatre, restored to its original 1907 splendor, features live entertainment, including plays and concerts. The Brown Grand Players and the Community Concert Association welcome student membership and participation. The stage is also home to at least one of the college's plays or musicals each year.

The Geary County Campus is located on a multi-building site in Junction City. The campus is easily accessed from Highways 77 and 18, or Interstate 70. It is a short drive from Manhattan, Abilene, Salina, and Herington. Located in the heart of the state, Junction City offers a small-town atmosphere with big-city amenities. It is also just minutes from Fort Riley, an active-duty Army post. The Geary County campus is presently non-residential, but there is ample housing conveniently located nearby.

HISTORY OF THE COLLEGE

The college was established as the Concordia Junior College in 1965 as part of the Concordia Public Schools. Classes first met on February 8, 1965, using the Concordia school's facilities.

On July 1, 1965, the Concordia Junior College became a member of the state system of community colleges under the name Cloud County Community Junior College. Classes began in the current location in the fall of 1968. The college is now known as Cloud County Community College.

The Concordia campus is made up of four buildings, grouped together on three levels, and connected by a central library. Additionally, Tech West houses the Nursing Department and the Child Care Center. There are 14 campus apartment buildings, as well as Thunder Heights, a 78-person, three-story building that offers private and semi-private rooms.

Situated on the hill south of campus, the Renewable Energy Park consists of two Northwind 100 wind turbines and a 208-kilowatt single-axis tracking solar farm. Combined, and at peak performance, the Renewable Energy Park can produce 408 kilowatts of electricity. The CloudPower Wind Farm was finished and commissioned in April 2010. Shortly thereafter, the college began

a major overhaul of the HVAC system in the main building, which included a switch from gas-fired boilers to a geothermal system. The geothermal well field consists of 99 wells, drilled to 400 feet deep, and arranged in three separate fields for redundancy. The SunPower Solar Farm was started in the summer of 2018 and commissioned in November. In combination, these features provide substantial energy savings for the college and make Cloud a unique example of combining wind, solar and geothermal energy sources.

The Renewable Energy Park provides the college with a significant reduction in carbon footprint. The geothermal HVAC system is completely powered by the Renewable Energy Park on an average day in Kansas, offsetting the college's costs in electricity and natural gas. When combined with the wind turbines and solar farm, the college will save 2,656 barrels of oil per year, or enough electricity to power 158 homes. In addition to the environmental benefits, the Renewable Energy Park also provides an on-site laboratory for students enrolled in the Renewable Energy programs. Students get the benefit of on-site equipment for lab training, as well as climb testing, rope rescue training, and routine maintenance work.

In March of 2018, the Dunning-Hamel Baseball Training Facility, a state of the art 5,250-foot heated indoor training facility, opened. The facility allows baseball and softball players day or night access for team or individual workouts.

In 2021, the college added an 8,000 square foot Agriculture facility on the south edge of the campus. This facility is used to offer hands-on learning opportunities for students and houses the Equestrian Team practice and all horse riding classes. Throughout the year, events such as livestock judging contests, the annual pig production sale, horse judging clinics, and demonstrations for animal science management and reproduction procedures are hosted in the facility.

In Junction City, the Grandview Plaza attendance center was opened in 1994 to better meet the needs of the population of the southeastern portion of Cloud's service area. In January 1998, the college opened the present Geary County site. The campus is composed of four buildings and offers a full range of academic programs and student support services. The Geary County campus is an integral part of Cloud County Community College, and its campus is distinguished by its own architecture and campus plan.

General Information

MISSION STATEMENT

Cloud County Community College prepares students to lead successful lives and enhances the vitality of our communities.

Guiding Values

Success

Students are our central focus, and we strive to see every student succeed.

"We champion individual success"

Excellence

We deliver forward thinking programs of study as well as industry-best practices that reflect the highest academic standards.

"We are committed to excellence"

Service

We make a positive difference in the lives of our students, community members, and each other through meaningful relationships.

"We make a difference"

Integrity

We uphold the highest standards of ethics and public stewardship.

"We do what is right"

Diversity

We encourage active citizenship and embrace the diversity of people and ideas.

"We are better together"

Accessibility

We provide the best value for a high quality, holistic education.

"We ensure every student has opportunities"

Sustainability

We promote renewable energy as well as sustainable lifestyles in our changing world.

"We are Black, Gold, and Green"

INSTITUTIONAL LEARNING OUTCOMES:

Critical Thinking:

1. Comprehend the implication of a topic or problem.
2. Locate and synthesize appropriate evidence.
3. Construct well-reasoned conclusion.

Diversity:

1. Examine diversity, both local and global, to develop an understanding of and appreciation for people and ideas.
2. Demonstrate understanding of personal responsibility as a member of diverse communities.

Ethics:

1. Practice professional standards within legal, ethical, and regulatory frameworks.

Employment:

1. Demonstrate knowledge of norms and expectations of professional environments.
2. Demonstrate skills in working with others in a professional and constructive manner.

Sustainability:

1. Students will understand the importance and implementation of sustainable practices that meet the needs of today without compromising the needs of the future.



General Information

NOTICE OF NONDISCRIMINATION

Cloud County Community College does not discriminate in admission to, access to, treatment of, or employment in its services, programs, or activities on the basis of race, color, national origin, sex (including pregnancy, sexual orientation, or gender identity), religion, age, disability, or veteran status. If you have questions, please contact the Section 504 coordinator at 2221 Campus Drive, Concordia, KS 66901 or at (785) 243-1435, ext 251 or 800-729-5101, ext 251.

ACCREDITATION

Cloud County Community College is accredited by the Higher Learning Commission, a commission of the North Central Association of Colleges and Schools, 230 South LaSalle Street, Suite 7-500 Chicago, Illinois, 60604, or (800) 621-7440.

STUDENT EDUCATIONAL RECORDS - RIGHTS OF PRIVACY (FERPA)

Cloud County Community College complies with the Family Education Rights and Privacy Act of 1974 (FERPA). FERPA is a Federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. For more information see Policy E5 at <https://www.cloud.edu/about/board-of-trustees/policies/>

BOOKSTORE

The T-Bird Bookstore caters to all of your classroom and apparel needs. T-books, which is an inclusive access program, helps keep the cost of textbooks down while also offering the convenience that comes with digital textbooks. For more information about inclusive access, go to <https://www.tbirdbookstore.com/>. They also offer classroom supplies, supplemental reading materials, and other spirit items. For additional information go to <https://www.tbirdbookstore.com/>

Tuition and Fees

Tuition

Tuition and comprehensive fees are subject to change each academic year. Current tuition and comprehensive fees can be found at <http://www.cloud.edu/admissions/cost/>. The Financial Aid Cost of Attendance (COA) can be found at <https://www.cloud.edu/students/financialaid/financial-aid-cost-of-attendance/>

Tuition and Fee Waiver for Dependents of Veterans and Safety Officers:

Tuition and Fees will be provided free of charge to the following (subject to provisions of K.S.A. 73-1216 and K.S.A. 75-4364)

- Any dependent of a prisoner of war
- Any dependent of a person missing in action
- Any dependent of a person who has died as a result of service-connected disability suffered during the Vietnam

Conflict

- Any dependent or spouse of certain military personnel who died on or after September 11, 2001, while, and as a result of, serving in active military service.
- Any dependent of a public safety officer who died as a result of injury sustained while performing the duties as a public safety officer.
- Tuition and Fees waiver will be applicable as long as the dependent is eligible, but not to exceed twelve (12) semesters of instruction.

Fees

Below is a listing of additional fees that may be charged that are not included in the comprehensive fees:

Accuplacer Testing Fee (on-site or remote)	\$10
Examity (virtual)	\$20
Ag Program Fee	\$25 per credit hour
**Ag Judging Lab Fee	\$200
Audit Fee	Same as Tuition
Calculator Rental	\$140
CDL Fees (total for program)	\$997
Graduation Application Fee	\$30
*Internet Course Processing Fee	\$25 per credit hour
Lab Fee	Fees vary per course
**Nursing Fees - Traditional Track (total for program)	\$3000
LPN to ADN Track (total for program)	\$1500
Nursing Program Fees	\$25 per credit hour
Lab Fees	\$60 per nursing course
Parking Permit	\$10 Concordia Campus
Private Music Lesson	\$80
Transcript Fee	\$5 to \$7.50
Renewable Energy Program Fee	\$25 per credit hour

*This fee is included in tuition amount

**fees may vary

Note: Fees are reviewed annually, and are subject to change.

Refund Payment Policy

Refunds may be issued to students dropping from courses. See Policy F6 at <https://www.cloud.edu/about/board-of-trustees/policies/> for the refund schedule.

General Information

For more information about services provided by Cloud County Community College, visit www.cloud.edu to access our website, or use the links provided below.

Admissions: <http://www.cloud.edu/admissions>

International Student Information: <http://www.cloud.edu/admissions/international-students>

Financial Aid: <https://www.cloud.edu/students/financialaid/>

Scholarships: <https://www.cloud.edu/admissions/cost/>

Campus Housing: <http://www.cloud.edu/Students/residence-life>

Advising: <https://www.cloud.edu/academics/advising/>

Enrollment Guide: <http://www.cloud.edu/academics/online>

Online: <http://www.cloud.edu/academics/online>

T-Bird Bookstore: <https://www.tbirdbookstore.com/default.asp?>

TRiO: <http://www.cloud.edu/academics/trio>

Student Activities: <http://www.cloud.edu/students/student-engagement>

Career Center: <http://www.cloud.edu/about/career-center>

Children's Center: <http://www.cloud.edu/about/children-center>

Campus Security: <http://www.cloud.edu/students/safety>

Veteran Services: <https://www.cloud.edu/students/veteranservices/>

Adult Education: <http://www.cloud.edu/academics/adult-education-program>

Accessibility & Health Services: <https://www.cloud.edu/students/accessibility-health-services/>

Student Success Center: <https://www.cloud.edu/academics/student%20success%20center/>

Academic Services

STUDENT SUCCESS CENTER

The mission of the Student Success Center is to provide assistance and services to support students at Cloud County Community College in achieving their academic goals.

Concordia Campus

The SSC offers a variety of services to support the success of all students at Cloud County Community College. We encourage you to stop by Room GR210 to meet our friendly staff and to see how we can help you succeed in your academic career at CCCC.

Services provided by the center are:

- Tutoring
- Test Proctoring
- Academic Coaching
- Editing and Proofreading
- Academic Support
- Reference Materials
- Computers
- Study Management Resources
- Relaxed and Quiet Study Environment
- Professional and Caring Staff

Distance Tutoring

Online tutoring is provided through a Zoom link. Students may make an appointment by calling 800-729-5101, ext. 231 or by emailing ssc@cloud.edu.

Connect to Zoom through Canvas by clicking on the Online Tutoring side tab on any class menu and then clicking on the link provided. Students can also use the following link: <https://zoom.us/j/7606607215>

Geary County Campus

The Student Success Center on the Geary County Campus is located in Building A. The center offers a full-service computer lab available for all students to use and provides support with homework on all subjects. Test proctoring is also available by appointment by calling 800-729-5101, ext 730 or emailing gccproctor@cloud.edu

For more information regarding the Student Success Center, see <https://www.cloud.edu/academics/student%20success%20center/>

LIBRARY

The Cloud County Community College Library supports and enhances the instructional programs of the College by providing resources and services to meet the higher education needs of students, faculty, staff and the communities we serve. We focus on promoting information literacy, i.e., the ability to locate, evaluate, and effectively and ethically use information.

For more information and to see what resources are available, go to: <https://www.cloud.edu/academics/library/>

ACCESSIBILITY SERVICES

Academic Accommodations: If academic accommodation is needed for any type of disability, students should contact the Director of Student Accessibility and Mental Health Services, located in UG 308 on the Concordia campus. Students requiring auxiliary aids and services need to request accommodation six to eight weeks in advance of the start of the semester.

Accessibility: If special arrangements are needed for accessibility, contact the Director of Student Accessibility and Mental Health Services to request accommodation six to eight weeks in advance of the start of the semester.

Emergency Evacuation: Students desiring assistance during emergency evacuations will need to complete a registration form each semester. Please contact the Director of Student Accessibility and Mental Health Services.

For more information go to <https://www.cloud.edu/students/accessibility-health-services/>.

Academic Regulations

ACADEMIC REGULATIONS

Certificates Offered

A Technical Certificate may be granted for programs of instruction that are less than 60 semester hours in length but more than 15 semester hours. Certificates place an emphasis on occupational experience and are designed to prepare students for specific occupations.

Degrees Offered

“Associate of Applied Science Degree” (A.A.S.) means a degree: granted to those who successfully complete programs which emphasize preparation for employment typically at the technical or semi-professional level; and consisting of a minimum of 62 semester credit hours and a maximum of 68 semester credit hours, in which not less than 15 semester credit hours in general education and not less than 30 semester credit hours in the area of specialized preparation are required. An exception/waiver to the 68 semester credit hour limit may be granted to meet specific criteria such as external program accreditations or other special requirements. Selected courses may transfer to a college or university upon validation of applicable coursework.

“Associate of General Studies” (A.G.S) means a degree: granted to those who successfully complete programs with an emphasis on a broad range of knowledge; and in which not less than 25 semester credit hours in general education and not less than 37 semester credit hours in a program of college-level work are required. Students can earn a General Studies Degree to be generally prepared for employment in the field.

“Associate of Arts Degree” (A.A.) means a transfer-oriented degree: granted to those who successfully complete programs equivalent to the freshman and sophomore level requirements for a bachelor of arts degree; and in which not less than 31 semester credit hours in general education are required.

“Associate of Science Degree” (A.S.) means a transfer- or professional-oriented degree: granted to those who successfully complete programs equivalent to the freshman and sophomore level requirements for a Bachelor of Science degree; and in which not less than 32 semester credit hours in general education are required.

Following are the general education requirements for each of the degrees. General education substitutions must be approved by the Vice-President for Academic Affairs. Program substitutions must be approved by the department chair. Electives should be selected in consultation with an academic advisor.

GENERAL EDUCATION REQUIREMENTS FOR CERTIFICATES AND DEGREES

CERTIFICATES:

16-Hour Certificates

3 credit hours General Education Courses (To be specified by the department)

30-Hour Certificates

6 credit hours General Education Courses (To be specified by the department)

45-Hour Certificates

9 credit hours General Education Courses (To be specified by department)

DEGREES:

Associate of Applied Science Degree

(This degree is considered a work-ready program and is not designed for transfer, however, courses may transfer to specific degree programs at selected colleges or universities.)

62 -68 credit hours including the following General Education minimum requirements:

- 3 credit hours Communication (Written)
- 3 credit hours Communications (Oral)
- 3 credit hours Mathematics General Education Courses, Intermediate Algebra, Survey of Math, or Technical Math
- 3 credit hours Humanities General Education Course
- 3 credit hours Social Sciences General Education Courses
- 3 credit hours Natural Science General Education Course

MINIMUM TOTAL 18 credit hours

Specialized and Related Competencies - Minimum of 44 credit hours from those listed below, to be determined by the department using the requirements of the occupation(s):

- Technical Knowledge
- Technical Skills
- Communication
- Science
- Mathematics
- Interpersonal Skills (employability skills)
- Courses from other technical disciplines



Academic Regulations

Associate of General Studies Degree

62 credit hours, including the following General Education minimum requirements:

- 6 credit hours Communications General Education Courses
 - 3 hours in Written Communications
 - 3 hours in Oral Communications
- 3 credit hours Mathematics General Education Courses or Intermediate Algebra
- 3 credit hours Humanities General Education Courses
- 3 credit hours Social Sciences General Education Courses
- 3 credit hours Humanities or Social Sciences General Education Courses (Must be from second area)
- 4 credit hours Natural Science w/Lab General Education Course
 - Either Biological or Physical Science Course
- 3 credit hours General Education Elective Course

MINIMUM TOTAL 25 credit hours

The awarding of an Associate of General Studies requires a student to complete a minimum of 37 elective credit hours in addition to the 25 hours of General Education listed above.

The Associate of General Studies degree is not intended for transfer to a college or university. The student may elect to use occupational/technical coursework in part or in whole to fulfill the block of elective credit hours. **Students should be aware that occupational coursework may not be accepted in transfer to another college or university**, however, general education courses and others may transfer to specific degree programs at selected colleges or universities.

Associate of Arts

62 credit hours including the following General Education minimum requirements:

- 9 credit hours Communications General Education Courses
 - 6 hours in Written Communications
 - 3 hours in Oral Communications
- 3 credit hours Mathematics General Education Courses
- 6 credit hours Humanities General Education Courses
 - From two areas
- 6 credit hours Social Sciences General Education Courses
 - From two areas
- 4 credit hours Natural Science General Education Course
 - Either Biological or Physical Science w/Lab Course
- 3 credit hours General Education Elective Course

MINIMUM TOTAL 31 credit hours

Associate of Science

62 credit hours including the following General Education minimum requirements:

- 9 credit hours Communications General Education Courses
 - 6 hours in Written Communications
 - 3 hours in Oral Communications
- 3 credit hours Mathematics General Education Courses
- 6 credit hours Humanities General Education Courses
 - From two areas
- 6 credit hours Social Sciences General Education Courses
 - From two areas
- 8 credit hours Natural Science General Education Courses
 - Both Biological and Physical Science Lab Courses

MINIMUM TOTAL 32 credit hours



GENERAL EDUCATION

General Education Philosophy

General Education broadens students' understanding of the world and prepares them for civic, social, and employment responsibilities. General education advances students' abilities to function in diverse and dynamic environments by enhancing communication, stimulating critical thinking, exploring modes of inquiry, developing creative work, fostering constructive attitudes regarding learning, and promoting academic literacy.

General Education Course List

The following courses are the approved courses that will fulfill the general education requirements for Cloud County Community College. These courses will fulfill the general education requirements for all degrees unless otherwise stated.

Academic Regulations

Communications General Education Courses

CM101 English Composition I.....	3 credit hours
CM102 English Composition II.....	3 credit hours
CM106 Creative Writing (AA & AS Degrees only) ..	3 credit hours
CM115 Public Speaking.....	3 credit hours
CM120 Survey of Technical Writing (Certs, AAS, & AGS Degrees only)	3 credit hours
CM240 Interpersonal Communications.....	3 credit hours

Humanities General Education Courses

Arts

AR100 Art Appreciation.....	3 credit hours
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Foreign Language

FL105 French I.....	5 credit hours
FL111 Spanish I.....	4 credit hours
FL113 German I.....	4 credit hours

History

HI108 Women in American Society.....	3 credit hours
HI120 World History I.....	3 credit hours
HI121 World History II.....	3 credit hours
HI122 U.S. History I.....	3 credit hours
HI123 U.S. History II.....	3 credit hours
HI124 Introduction to History.....	3 credit hours

Humanities

CM106 Creative Writing.....	3 credit hours
HU201 Humanities I.....	3 credit hours
HU202 Humanities II.....	3 credit hours
JN100 Mass Media in Society.....	3 credit hours

Literature

CM121 Introduction to Literature.....	3 credit hours
CM122 American Literature I.....	3 credit hours
CM123 American Literature II.....	3 credit hours
CM124 World Literature & the Human Experience	3 credit hours
CM127 The Short Story.....	3 credit hours

Music

MU100 Music Appreciation.....	3 credit hours
MU101 American Music.....	3 credit hours
MU102 World Music.....	3 credit hours
MU103 History of Rock Music.....	3 credit hours

Philosophy

PH100 Introduction to Philosophy.....	3 credit hours
PH105 Ethics.....	3 credit hours
RE104 World Religions.....	3 credit hours

Theatre

CM140 Theatre Appreciation.....	3 credit hours
CM148 American Cinema Appreciation.....	3 credit hours

Mathematics General Education Courses

MA104 Technical Math (Certs & AAS Degrees only).....	3 credit hours
MA105 Survey of Math (Certs & AAS Degrees only).....	3 credit hours

MA110 Intermediate Algebra (Certs, AAS, & AGS Degrees Only).....	3 credit hours
MA111 College Algebra.....	3 credit hours
MA112 Trigonometry.....	3 credit hours
MA114 Elementary Statistics.....	3 credit hours
MA115 General Calculus.....	3 credit hours
MA120 Analytical Geometry/Calculus I.....	5 credit hours
MA121 Analytical Geometry/Calculus II.....	5 credit hours
MA130 Contemporary Math.....	3 credit hours

Natural Sciences General Education Courses

Biological Science

SC101 General Biology.....	4 credit hours
SC110 Principles of Biology I.....	5 credit hours
SC120 Human Anatomy & Physiology I.....	4 credit hours
SC126 Anatomy and Physiology.....	5 credit hours
SC151 Principles of Biology II.....	5 credit hours

Physical Science

SC103 Physical Science.....	5 credit hours
SC104 Geology.....	4 credit hours
SC105 General Astronomy.....	4 credit hours
SC107 Meteorology.....	4 credit hours
SC130 General Chemistry.....	5 credit hours
SC131 Chemistry I.....	5 credit hours
SC137 Natural Hazards and Disasters.....	3 credit hours
SC138 Natural Hazards and Disasters Lab.....	1 credit hour
SC140 College Physics I.....	5 credit hours
SC142 University Physics I.....	5 credit hours
SC146 Environmental Science & Conservation.....	3 credit hours
SC147 Environmental Science & Conservation Lab ..	1 credit hour

Social & Behavioral Science General Education Courses

Anthropology

SS125 Introduction to Cultural Anthropology.....	3 credit hours
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Economics

EC101 Principles of Macroeconomics.....	3 credit hours
EC102 Principles of Microeconomics.....	3 credit hours

Geography

GE101 World Geography.....	3 credit hours
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Political Science

SS140 U.S. Government: National.....	3 credit hours
SS141 U.S. Government: State and Local.....	3 credit hours
SS142 Current Political Issues.....	3 credit hours
SS150 Introduction to International Relations.....	3 credit hours

Psychology

SS101 General Psychology.....	3 credit hours
SS105 Human Growth & Development.....	3 credit hours

Sociology

SS106 Marriage and Family.....	3 credit hours
SS130 Introduction to Sociology.....	3 credit hours
SS131 Cultural Diversity and Ethnicity.....	3 credit hours
SS201 Social Problems.....	3 credit hours

Academic Regulations

ATTENDANCE

Cloud County Community College regards punctual and consistent classroom attendance as integral to academic success and expects it of all students in all classes. Students are expected to attend all classes as scheduled regardless of delivery format. For online learners, regular, systematic weekly participation is expected according to the tenets established on the course syllabus. A copy of the Attendance policy and procedures may be obtained from the student's faculty, the Office of the Vice-President for Academic Affairs, or found in Policy D4 at <http://www.cloud.edu/About/Board-of-Trustees/policies/index>. Each instructor's attendance requirements will be published in the course syllabus. Penalties for excessive absences, up to and including the reduction of the final grade, will be included in the course syllabus. The instructor or the Student Retention Specialist may notify students whose class performance has been jeopardized by excessive absences.

ACADEMIC INTEGRITY AND HONESTY

A standard of honor, fair play, trust, and honesty - fairly applied - is essential to a good learning environment. Students are expected to adhere to such standards in all areas of academic pursuit. Students who compromise the integrity of the classroom are subject to disciplinary action on the part of the College.

A copy of the Academic Integrity and Honesty policy and procedures may be obtained from the Office of the Vice-President for Academic Affairs, or Policy D17 at <https://www.cloud.edu/about/board-of-trustees/policies/>.

COURSE TRANSFER AND PROGRAM ARTICULATION

Cloud County Community College accepts prior college coursework in transfer from regionally accredited institutions of higher education. These courses are accepted either as direct equivalencies to CCCC courses, as substitutions for CCCC courses, or as general electives. The College participates in the Kansas Core Outcomes Group state-wide initiative, which aligns learning outcomes of college courses typically taught by Kansas colleges and universities. The courses reviewed through this process are accepted in transfer to and from any Kansas institution of higher education. See <http://www.cloud.edu/academics/transfer-ability> for additional information.

CCCC also develops program articulation agreements with various colleges and universities around the state, region, and nation. These articulations are designed for CCCC graduates to transfer their associate degree as completion of the first two years of a related baccalaureate degree program. The College has articulation agreements with other community colleges in the state designating specific CCCC courses that satisfy program requirements at the receiving community college. These articulation agreements can be found at <http://www.cloud.edu/academics/transferability>.

Additional transfer and program articulation can be found in Policy D23 at <http://www.cloud.edu/about/board-of-trustees/policies>.

CREDIT BY EXAMINATION

1. The student should enroll in the course they intend to "quiz-out" of. Approval for credit by examination must be obtained from both the Vice-President for Academic Affairs and the instructor prior to taking the exam. Forms are available in the Student Records Office. The exam must be taken within the first five business days of the semester.
2. If the examination is passed the student will be dropped from the course with no refund and a notation, "Credit by Exam", will appear on the transcript for this course with the grade earned on the exam. The student may then enroll in a sequential course with approval of the Vice-President for Academic Affairs and the instructor. Enrollment in the quiz-out and sequential course may not be done concurrently.
3. If the examination is not passed the student will remain enrolled in the course.
4. An examination fee of \$15.00 will be charged for all attempted quiz-outs. Students will receive a grade for all courses successfully completed via the quiz-out method.
5. High school students are not eligible to quiz-out of a college course.

CREDIT FOR PRIOR LEARNING: AP, CLEP, MILITARY CREDIT, MILITARY AND INDUSTRY TRAINING AND EXPERIENCE

Credit for Prior Learning (CPL) is the evaluation and assessment of an individual's learning obtained outside a formal academic setting. For more information, see Policy D6 at <https://www.cloud.edu/about/board-of-trustees/policies/>.

STUDENT CLASSIFICATION

1. Freshman: Any student having fewer than 30 semester credit hours.
2. Sophomore: Any student having 30 or more credit hours
3. Special students, include the following: (1) high school students taking college courses; (2) gifted students, as defined by K.S.A. 72-962(g); (3) students who earned more than 64 hours; and (4) those students not meeting specific requirements for admission.

ENROLLMENT AND WITHDRAWAL

Enrollment

New students will meet with advisors during a New Student Enrollment Day to discuss academic goals and to enroll in courses. Returning students will schedule appointments to meet with their advisor to enroll in courses during designated enrollment periods. These dates are scheduled and published throughout the year. Early enrollment is encouraged due to a greater course selection and to provide time to complete the enrollment process. For assistance at the Concordia Campus, contact the Advisement Center 800.729.5101, ext 275 or advisement@cloud.edu. For the Geary County Campus, contact Student Services at 800.729.5101, ext 714 or gcadvisement@cloud.edu.

After students complete the personal information update within their iCloud account, if required, students will be ready to

Academic Regulations

enroll in courses. At the time of enrollment, official transcripts or placement scores must be on file. Refer to the Placement Test section for more details.

All students are required to have an established method of payment by the scheduled due dates assigned for each term enrolled to ensure FULL access to classes and to prevent being dropped from classes.

Students taking off-campus or online courses should enroll through iCloud or contact an advisor.

Prior to the first day of class, students are required to identify the prescribed textbook and all materials which will be required for each course. Books and access codes are often required for on-line courses. Visit the T-Bird bookstore at <https://www.tbirdbookstore.com/> to view and purchase course materials during established timeframes. For many courses, the bookstore has launched an inclusive access program called T-Books. More information can be found at https://www.tbirdbookstore.com/inclusive_access.asp?. These books and materials can be obtained from the T-Bird Bookstore located on the Concordia Campus and at tbirdbookstore.com.

Additional information can be found in Policy D5 at <https://www.cloud.edu/about/board-of-trustees/policies/>.

Placement Test

CCCC incorporates multiple measures for placement into English, mathematics, and some science courses. Placement options include cumulative high school GPA, ACT, SAT, or Accuplacer test scores; this information must be received prior to enrollment in applicable courses. Placement scores that are no more than three years old for Math and five years old for English are acceptable. Students without scores on file are given an Accuplacer test and will incur a test fee that will be due at the time of testing. There is a 1-month waiting period for retake tests. The same fee applies to retake tests.

Scores from the test will be used to determine the appropriate courses for the student. Depending on the scores, students may be required to take developmental courses. These courses will prepare the student for college courses, appear on the official transcript, and be included in the career GPA. Developmental courses do not count toward the graduation requirements.

High school students in the CCCC services area, who are enrolling in concurrent courses through CCCC, are offered the Accuplacer placement test during designated periods at the high schools. The test fee will be due prior to or at the time of testing. See the coordinator at your high school for more information.

Students enrolling in courses at CCCC may take the Accuplacer placement test at the Concordia or Geary County campuses throughout the year. Students may also take the Accuplacer placement test remotely through Examity. Students wishing to schedule a an Accuplacer test can call 800-729-5101, ext. 275 for the Concordia campus or 800.729-5101 ext. 714 for the Geary County Campus.

The Concordia and Geary County campuses are remote Accuplacer test sites. Students can also make arrangements to test at a site closer to the student by requesting a voucher. Students

studying at other institutions can call the Advisement Center on the Concordia campus or the Student Services Office at the Geary County Campus for information regarding testing details and fees.

Add Procedure

Students may add courses either through iCloud (student web portal) or by contacting their academic advisor at the GCC Student Services Office or the Advisement Center on the Concordia Campus. Guidelines for adding a class can be found in Policy D5 at <https://www.cloud.edu/about/board-of-trustees/policies/>

Drop/Withdrawal

Students may drop or withdraw from classes according to guidelines in Policy D5 at <https://www.cloud.edu/about/board-of-trustees/policies/>.

Requests for withdrawals, including total withdrawals, outside these established timelines will be considered for extraordinary or unusual circumstances as determined by the Vice President for Academic Affairs.

GRADING SYSTEM

For each semester hour of graded work, students earn points, as follows:

A	Excellent.....	4 grade points
B.....	Good.....	3 grade points
C.....	Average.....	2 grade points
D	Poor	1 grade points
F	Failing.....	0 grade points
W	Withdrawn.....	0 grade points
P	Pass	0 grade points
NP.....	No Pass.....	0 grade points
I.....	Incomplete.....	0 grade points
AU	Audit.....	0 grade points
WIP	Work in Progress	0 grade points
XF	Academic Integrity Violation.....	0 grade points
WA.....	Administrative Withdrawal	0 grade points

Additional information can be found in Policy D3 at <https://www.cloud.edu/about/board-of-trustees/policies/>.

Grade Point Average (GPA):

Grade point average is a measure of scholastic performance calculated by dividing the number of grade points by the hours of work attempted, using the grade point scale above. Grades A, B, C, D, F and XF are computed in the Grade Point Average. The numerical value of each letter grade is multiplied by the credit hour value of the course. The resulting total of grade points is divided by the total number of these hours. Grades of W, P, NP, I, AU and WA are not computed in the GPA.

Academic Regulations

Satisfactory Academic Progress Chart

HONOR ROLL

The President's Honor Roll recognizes students who have earned a semester grade point average of 3.9 - 4.0. The Honor Roll includes students who have earned a semester grade point average of 3.6 to 3.899. In order to be eligible for these honor rolls, a student must complete a minimum of 12 hours in any given semester. These lists are published after the fall and spring semesters.

HONOR GRADUATE

A student meeting all graduation requirements for Cloud County Community College and who has a 3.6 GPA or higher for **all college** credit hours completed (Cloud County Community College credits and all transfer hours) may be designated an Honor Graduate.

For commencement ceremony purposes in the spring, tentative Honor Graduates will be recognized based upon the cumulative GPA at the end of the fall semester. However, the official designation will take place after the final GPA is determined based upon the criteria stated above and the degree has been conferred. At that point, the designation of "Honor Graduate" will be noted on the student's transcript.

ACADEMIC PROBATION & SUSPENSION SANCTIONS

For students at Cloud County Community College, academic probation and academic suspension are not punitive measures or disciplinary actions. The purpose of this policy is to provide opportunities for students to succeed.

The clear intent of these sanctions is:

- To identify students whose academic efforts have not been successful;
- To provide these students the opportunity for guidance in developing strategic plans to succeed at college level learning; and
- To link these students with staff and faculty who can offer support and encouragement to follow their plans through to success.

Satisfactory Academic Progress

To graduate, students must earn a minimum cumulative GPA of 2.0. To reach this required minimum, students must maintain certain GPA minimums as compared to completed credit hours (see chart below).

Earned credit hour minimum for satisfactory academic progress: Students will pass 50% (grades A, B, C, D, or P) of stated credit hours in any given semester.

Academic Probation

Students who have attempted eleven or more cumulative credit hours at Cloud County Community College shall be placed on academic probation when the cumulative grade point average or semester grade point average is less than that needed to achieve satisfactory academic progress, or a student passes less than 50% of courses for which they are enrolled.

<u>Total Attempted Credit Hours</u>	<u>Minimum Career GPA</u>	<u>Minimum Semester GPA</u>
1-10 credit hours	N/A	N/A
11-20 credit hours	1.60	1.70
21-30 credit hours	1.70	1.70
31-40 credit hours	1.80	1.70
41-50 credit hours	1.90	1.70
51-94 credit hours	2.00	1.70

When a student transfers in from another college or university, after the transfer transcript is evaluated, satisfactory academic progress will be reviewed according to CCCC requirements and, if applicable, academic probation will be noted on the CCCC transcript by the Registrar or their designee.

At the close of each semester, the academic performance of students on academic probation will be re-evaluated in terms of satisfactory academic progress.

If the student's semester and cumulative GPA meet the requirements for satisfactory academic progress and the student has completed at least 50% of the courses for which they are enrolled, the student no longer will be considered on academic probation.

Academic Suspension

If the student does not meet satisfactory academic progress requirements, the student will be placed on academic suspension after review by the Academic Probation and Suspension Committee.

The terms of academic suspension shall be as follows:

1. A student on academic suspension will not be eligible to register for the next regular fall or spring semester.
2. After one semester of academic suspension, the student may enroll on continuing academic probation status.

Reinstatement

A student who has been suspended for academic reasons may file a petition for reinstatement with the Academic Probation and Suspension Committee. The Academic Probation and Suspension Committee will consider each petition individually and may request the student to appear before the committee. If reinstated, the probationary status will continue.

For more information regarding Probation/Suspension see Policy D14 at <https://www.cloud.edu/about/board-of-trustees/policies/>

FINAL EXAMINATIONS

Final Examinations shall be given during the time allotted on the academic calendar for such examinations. Instructors will determine the activities conducted during the exam period.

Face to Face courses must meet during the scheduled exam period and students must be present in order to participate in final activities with limited exceptions.

Academic Regulations

When a student has three or more final examinations scheduled for one day, that student may petition the instructor(s) prior to final's week for an exception to reschedule the middle examination(s), leaving two examinations for a testing day. Any difficulties arising from this process should be referred to the Vice President for Academic Affairs.

Other exceptions may be considered only in the event of a true emergency. Instructors will have discretion in approval of exigent circumstance and emergency exam rescheduling. Instructors may require a time limit deadline for exam change requests.

Instructors may opt to excuse students from the final exams based on class standing.

Any deviation from these policies shall be cleared with the Vice President for Academic Affairs.

GRADUATION

In order to graduate, students are expected to complete the graduation requirements listed in the catalog that was in effect at the time they first enrolled. However, if graduation requirements change while the student is pursuing a degree, the student will have the choice of continuing with the old requirements, where those courses are available, or accepting the new requirements in order to graduate. If a student sits out two consecutive semesters, the student will be readmitted under the graduation requirement in the current catalog.

Graduation requirements are as follows:

- Completion of the general education requirements.
- Completion of a minimum of 62 credit hours and an overall grade point average of at least 2.0. Courses must be 100 level or above.
- Technical courses typically will not count toward AA or AS degree requirements. Technical courses are those created to satisfy specific program outcomes for the Associate of Applied Science programs and certificates and Allied Health courses. They include courses with prefixes of AH, IE, MS, NR, SE, UA, TD, and WE courses.
- For the Associate of Applied Science Degree, completion of the departmentally approved program.
- Students completing requirements during the fall semester will be part of the May ceremony. Those students must submit a graduation application by December 1. Students completing requirements during the spring or summer semester must submit a graduation application by March 1 to participate in the commencement ceremony.
- No more than 12 hours of PE activity course credits can be used toward any of Cloud's associate degrees.
- A student must earn 15 hours of credit as a Cloud County Community College student for completion of the Associate's Degree being sought. For a Technical Certificate, students must earn 8 of 30 hours of credit or 4 of 16 hours of credit as a CCCC student. These courses must be 100 level or above.

- A high school student who petitions to graduate with an AA/AS/AGS/AAS must present a high school transcript demonstrating completion of high school graduation requirements.

Cloud County Community College holds one commencement ceremony, which takes place in May. It is the responsibility of the student to meet all requirements for graduation, and to check with the Student Records Office well in advance so there are no deficiencies.

ACADEMIC DUE PROCESS

In order to provide the highest level of service to the student, CCCC has a policy and procedures in place for addressing any complaint or dispute related to academic matters. The complete Academic Due Process policy and procedures may be obtained in Policy D19 at <https://www.cloud.edu/about/board-of-trustees/policies/>. Students who wish to appeal any academic dispute arising from an academic endeavor must follow the procedures of this policy. Failure to comply with these procedures shall be grounds for dismissal of any complaint or dispute and dismissal of the complaint shall be final.

ASSESSMENT OF STUDENT LEARNING

Assessment of student learning is a critical part of the education process at CCCC. Ongoing assessment of student learning is a means for the College to measure its success in meeting the mission and for continued enhancement of both academic programs and student services. Contributions by students constitute a critical source of assessment data. Throughout their educational career at CCCC, all students will be expected to contribute to the assessment program by completing surveys, standardized tests, submitting academic work products, working with academic advisors, and completing exit interviews as required by specific programs. CCCC believes assessment of student learning leads to decisions which affect the entire college thus CCCC faculty, staff and administration are committed to an ongoing assessment program to continually improve teaching and learning.

LEAVE OF ABSENCE

Cloud County Community College is committed to student success and provides services to help students who need an extended leave of absence due to personal tragedy, family illness, death in the family, or other sudden personal issue.

If a student needs an extended leave of absence due to one of the above circumstances, please notify the Director of Advisement and Retention Services located in the Advisement Center. In emergency situations when the student is not able to contact the Advisement Center, a family member or friend should notify the Advisement Center for the student. The Director of Advisement and Retention Services will then notify the student's instructors and the Vice President for Academic Affairs.

Academic Regulations

COURSE TRANSFER

COURSE TRANSFER

The Kansas Board of Regents has now approved a list of courses for guaranteed transfer among all Kansas public postsecondary institutions. A student who completes these courses at any Kansas public community college, technical college, or university can be certain that he or she can transfer that course to any other public institution in Kansas in pursuit of a degree or credential.

A list of the courses approved for the statewide guaranteed transfer may be found at <https://www.kansasregents.org/academic-affairs/transfer-articulation>. Additional courses are added annually.

REVERSE TRANSFER

REVERSE TRANSFER

Students who transfer to a Kansas public university from a Kansas public community college or technical college (or vice versa) are eligible for Reverse Transfer, which allows for the attainment of any associate degree for which one is eligible along the way to additional certificates and degrees. Within a student's first semester, those who transfer coursework from a public university, community college or technical college will be notified if they are eligible to be considered for reverse transfer degree status and which courses are needed to finish the related degree. Students who then complete the coursework for a given associate degree will be eligible to receive that degree, administered automatically by correspondence between the new institution and the university, community college or technical college the student last attended.

Visit <https://www.kansasregents.org/students/reverse-transfer-2> for more information.

KS DegreeStats.org

There are many factors to consider when picking the college and the degree that are the best match for you. Explore: ksdegreestats.org to learn more about the specific costs of each undergraduate degree program offered in Kansas, and the earnings those graduates are making today.



CAREER PROGRAMS

Associate of Applied Science Degrees

The career program is for students who want to enter the workforce in a specific career after obtaining an associate degree. An Associate of Applied Science degree is awarded after completion of a minimum of 62 hours in a departmentally approved program, and 124 grade points. Of the hours required, a minimum of 15 hours must be General Education courses. Certificates are also available in many of the career programs. For information about courses in the career programs offered online visit <http://www.cloud.edu/academics/online/>.

Agricultural Production & Services	Early Childhood Education (Certificates)	Solar Energy
Applied Technologies	Emergency Medical Technician (Certificate)	Unmanned Aircraft Systems
Certified Medical Aide	Nursing	Welding (Certificate)
Certified Nurse Aide	Pharmacy Technician (Certificate)	Wind Energy Technology
Commercial Drivers License (Certificate)		

GENERALIZED PROFESSIONAL

Associate of General Studies Degrees

The general studies program is designed for students who want to enter the workforce after obtaining an associate degree. This degree allows student flexibility in selected courses applicable to their desired field of study. Both transfer courses and technical courses accumulate toward the 62 hours needed for completion. Of the hours required, a minimum of 24 hours must be General Education courses. After degree completion, students could seek employment or decide to apply coursework toward a transfer program. For information about courses in the program offered online visit <http://www.cloud.edu/academics/online/>.

Agriculture & Industrial Technology Business Interdisciplinary Studies Renewable Energy

TRANSFER PROGRAM

Associate of Arts and Associate of Science Degrees

The transfer program is designed for students planning to enter professions requiring a bachelor's degree. During their time at Cloud, students work toward completing the Associate of Arts or the Associate of Science degree. These 62 credit hour degrees contain required General Education courses as well as electives which, with the aid of an Academic Advisor, may be selected to fulfill freshman and sophomore level course needs in the student's desired major at a four-year college or university. Transfer materials for regional colleges and universities are available in the Advisement Center to assist students and advisors with course selection. Additional transfer information is available on the website <http://www.cloud.edu/academics/transferability>. For information about courses in the transfer program offered online visit <http://www.cloud.edu/academics/online>.

Agriculture	Health & Human Performance	Nursing & Allied Health	Social & Behavioral Science
Ag Communications	Athletic Training	Pre-Dental Hygiene	Anthropology
Ag Economics	Coaching	Pre-Nursing BSN	Criminal Justice
Agronomy	Kinesiology/Exercise Science	Pre-Radiological Tech	Political Science/Pre-Law
Animal Science	Sport Management	Pre-Respiratory Therapy	Family Studies & Human Services
Equine	Dietetics	Renewable Energy Technology	Family & Consumer Science
Pre-Veterinary Medicine	Humanities & Fine Arts	Science	Sociology/Social Work/Counseling
Business	Art	Biology	
General Business	Music	Chemistry	
Communications	History	Earth Science	
English	Interdisciplinary Studies	Physics	
Journalism/Mass Communications	Mathematics & Engineering	Pre-Chiropractic	
Speech/Theatre	Architecture	Pre-Dentistry	
Education	Engineering	Pre-Medicine	
Elementary	Engineering Technology	Pre-Occupational Therapy	
Physical Education	Mathematics	Pre-Pharmacy	
K-12 Secondary		Pre-Physical Therapy	
		Pre-Physician Assistant	

Focus Areas:

Agribusiness, Agronomy,
Livestock Production,
Communications, Equine
Science, Ag Engineering,
Pre-Veterinarian,
Horticulture

AGRICULTURE & INDUSTRIAL TECHNOLOGY

Department Chair: Jamieson Gross
jgross@cloud.edu •• 785.243.1435, ext. 273



Potential Careers:

- Agronomist
- Ag & Food Science Technician
- Ranch Manager
- Agriculture Teacher/Professor
- Communications Specialist
- Professional Truck Driver
- Welder

DEGREES & CERTIFICATES

Commercial Drivers License16-hour certificate
 Welding.....18-hour certificate
 Production & Services16-hour certificate
 Production & Services30-hour certificate

Production & Services45-hour certificate
 Production & Services A.A.S. - 62 hours
 Associate of General Studies..... A.G.S. - 62 hours
 Associate of Science A.S. - 62 hours

Ag Education majors, refer to the Education Program

AGRICULTURE & INDUSTRIAL TECHNOLOGY

Program Learning Outcomes

Agriculture:

16-hour Certificate

1. Perform agricultural calculations.
2. Describe multiple career opportunities in agriculture.

30-hour Certificate:

1. Perform agricultural calculations.
2. Describe multiple career opportunities in agriculture.
3. Explain technology uses in agriculture.

45-hour Certificate:

1. Perform agricultural calculations.
2. Describe multiple career opportunities in agriculture.
3. Explain technology uses in agriculture.
4. Identify agricultural production inputs and outputs.

Associate of Applied Science:

1. Perform agricultural calculations.
2. Describe multiple career opportunities in agriculture.
3. Explain technology uses in agriculture.
4. Identify agricultural production inputs and outputs.
5. Identify and describe effective agricultural advertising and their effects on the market.

Associate of Science:

1. Perform agricultural calculations.
2. Describe multiple career opportunities in agriculture.
3. Explain technology uses in agriculture.
4. Identify agricultural production inputs and outputs.
5. Discuss global market issues.

Commercial Drivers License:

1. Demonstrate the safe operations of a commercial vehicle.
2. Demonstrate the skills to pass the State Commercial Driving License test.

Welding:

1. Develop the cognitive and physical skills necessary to pass American Welding Society certifications.
2. Identify safe welding practices and procedures conforming to American Welding Society standards.



AGRICULTURE & INDUSTRIAL TECHNOLOGY

COMMERCIAL DRIVERS LICENSE

16-Hour Certificate

Required CDL Courses		16 cr
TD250	CDL Class A Truck Driving Training I	8
TD251	CDL Class A Truck Driving Training II	7
TD252	Defensive Driving For the Professional Truck Driver	1

WELDING

18-Hour Certificate

Required General Education Courses		3 cr
<i>Mathematics Requirement</i>		3
MA104 Technical Math (3 cr) or Mathematics General Education Course		

Required Welding Courses		15 cr
IE117	OSHA 10-Hour General Industry Training	1
IE125	Blueprint Reading and Cutting Processes	2
IE126	Shielded Metal Arc Welding	3
IE127	Gas Metal Arc Welding	3
IE128	Flux Core Arc Welding	3
IE129	Gas Tungsten Arc Welding	3



AGRICULTURE & INDUSTRIAL TECHNOLOGY

AGRICULTURE PRODUCTION & SERVICES 16-Hour Certificate

Required General Education Courses 3 cr

<i>Mathematics Requirement</i>	3
MA110 Intermediate Algebra (3 cr) or	
MA104 Technical Math (3 cr) or	
Mathematics General Education Course	

Required Agriculture Courses 7 cr

AG101 Crop Science (4 cr) or	4
AG150 Introduction to Horticulture (4 cr)	
AG115 Animal Science (3cr) or	3
AG130 Principles of Ag Economics (3 cr)	

AG150 Introduction to Horticulture	4
AG166 Fundamentals of Livestock Nutrition	3
AG210 Ag Advertising & Design	3
AG220 Cooperative Ed Internship	1-4
AG225 Basic Equitation	3
AG226 Advanced Equitation	3
AG228 Focused Equitation	3

Elective Courses 6 cr

AG101 Crop Science	4
AG102 Intro to Plant Pest Control	3
AG105 Range Management	3
AG111 Animal Management	3
AG115 Animal Science	3
AG122 Introduction to Horsemanship	2
AG128 Animal Health & Nutrition	3
AG130 Principles of Ag Economics	3
AG132 Agricultural Management	3
AG134 Agricultural Marketing	3



AGRICULTURE & INDUSTRIAL TECHNOLOGY

AGRICULTURE PRODUCTION & SERVICES

30-Hour Certificate

Required General Education Courses 6 cr

<i>Mathematics Requirement</i>	3
MA110 Intermediate Algebra (3 cr) or	
MA104 Technical Math (3 cr) or	
Mathematics General Education Course	
<i>Natural Science Requirement (1 area required)</i>	3
Physical Science General Education	
Biological Science General Education	

Required Agriculture Courses 10 cr

AG101 Crop Science (4 cr) or	4
AG150 Introduction to Horticulture (4 cr)	
AG115 Animal Science (3cr)	3
AG130 Principles of Agricultural Economics (3 cr)	3

Elective Courses 14 cr

Economics

AG132 Agriculture Management	3
AG134 Agricultural Marketing	3
AG210 Agriculture Advertising and Design	3
AG220 Cooperative Ed Internship	1-6

Agronomy

AG101 Crop Science	4
AG102 Intro to Plant Pest Control	3
AG103 Plants & Soils for Crop Production	3
AG104 Soils	4
AG105 Range Management	3
AG106 Soil Classification and Evaluation	1
AG107 Agronomy ID & Experimentation	1
AG150 Introduction to Horticulture	4
AG220 Cooperative Ed Internship	1-6

Animal Science

AG111 Animal Management	3
AG118 Principles of Livestock Selection	2
AG119 Principles of Livestock Selection II	1
AG128 Animal Health & Nutrition	3
AG139 Farm Animal Reproduction	3
AG159 Equine Evaluation	1
AG166 Fundamentals of Livestock Nutrition	3
AG220 Cooperative Ed Internship	1-6

Equine Science

AG111 Animal Management	3
AG122 Introduction to Horsemanship	2
AG128 Animal Health & Nutrition	3
AG139 Farm Animal Reproduction	3
AG159 Equine Evaluation	1
AG165 Equine Evaluation II	1
AG166 Fundamentals of Livestock Nutrition	3
AG220 Cooperative Ed Internship	1-6
AG225 Basic Equitation	3
AG226 Advanced Equitation	3
AG228 Focused Equitation	3



AGRICULTURE & INDUSTRIAL TECHNOLOGY

AGRICULTURE PRODUCTION & SERVICES

45-Hour Certificate

Required General Education Courses 10 cr

<i>Communication Requirement</i>	3
CM115 Public Speaking (3 cr) or Interpersonal Communications (3 cr)	
<i>Mathematics Requirement</i>	3
MA110 Intermediate Algebra (3 cr) or MA104 Technical Math (3 cr) or Mathematics General Education Course	
<i>Natural Science Requirement (1 area required)</i>	4
Physical Science General Education Biological Science General Education	

Required Agriculture Courses 13 cr

AG101 Crop Science (4 cr) or AG150 Introduction to Horticulture (4 cr)	4
AG115 Animal Science (3cr)	3
AG130 Principles of Agriculture Economics	3
AG132 Agriculture Management or AG134 Agriculture Marketing	3

Elective Courses 22 cr

Business/Economics	
AG132 Agriculture Management	3
AG134 Agricultural Marketing	3
AG210 Ag Advertising and Design	3
BE161 Accounting I	3
BE162 Accounting II	3
BE188 Principles of Advertising	3
AG220 Cooperative Ed Internship	1-6

Agronomy

AG101 Crop Science	4
AG102 Intro to Plant Pest Control	3
AG103 Plants & Soils for Crop Production	3
AG104 Soils	4
AG105 Range Management	3
AG106 Soil Classification and Evaluation	1
AG107 Agronomy ID & Experimentation	1
AG150 Introduction to Horticulture	4
AG220 Cooperative Ed Internship	1-6

Animal Science

AG111 Animal Management	3
AG118 Principles of Livestock Selection	2
AG119 Principles of Livestock Selection II	1
AG128 Animal Health & Nutrition	3
AG139 Farm Animal Reproduction	3
AG159 Equine Evaluation	1
AG166 Fundamentals of Livestock Nutrition	3
AG220 Cooperative Ed Internship	1-6

Equine Science

AG111 Animal Management	3
AG122 Intro to Horsemanship	2
AG128 Animal Health & Nutrition	3
AG139 Farm Animal Reproduction	3
AG159 Equine Evaluation	1
AG165 Equine Evaluation II	1
AG225 Basic Equitation	3
AG226 Advanced Equitation	3
AG228 Focused Equitation	3



AGRICULTURE & INDUSTRIAL TECHNOLOGY

AGRICULTURE PRODUCTION & SERVICES

Associate of Applied Science - 62 Hours

Required General Education Courses 19 cr

<i>Communication Requirement</i>	6
CM101 English Composition I (3 cr) or	
CM120 Survey of Technical Writing (3 cr)	
CM115 Public Speaking (3 cr) or	
CM240 Interpersonal Communications (3 cr)	
<i>Humanities Requirement (1 area required)</i>	3
Art Humanities	
Music Literature	
Theatre Philosophy	
Foreign Language History	
<i>Mathematics Requirement</i>	3
MA110 Intermediate Algebra (3 cr) or	
MA104 Technical Math (3 cr) or	
Mathematics General Education Course	
<i>Natural Science Requirement</i>	4
Science Gen Ed with Lab	
<i>Social/Behavioral Science Requirement (1 area required)</i>	3
Economics Anthropology	
Psychology Political Science	
Sociology Geography	

Required Agriculture Courses 19 cr

AG101 Crop Science (4 cr) or	
AG150 Introduction to Horticulture (4 cr)	4
AG115 Animal Science	3
AG130 Principles of Ag Economics	3
AG132 Agriculture Management	3
AG134 Agriculture Marketing	3
AG210 Agriculture Advertising and Design	3

Elective Courses 24 cr

Economics	
AG217 Farm Computer Applications	3
AG220 Cooperative Ed Internship	1-6
BE100 Introduction to Business	3
BE160 Business Accounting	3
BE161 Accounting I	3
BE162 Accounting II	3
BE188 Principles of Advertising	3
MG102 Introduction to Entrepreneurship	3

Agronomy	
AG101 Crop Science	4
AG102 Intro to Plant Pest Control	3
AG103 Plant & Soils for Crop Production	3
AG104 Soils	4
AG105 Range Management	3
AG106 Soil Classification	1
AG107 Agronomy Identification & Experimentation I	1
AG112 Agronomy Identification & Experimentation II	1

AG150 Introduction to Horticulture	4
AG164 Advanced Soil Classification & Evaluation	1
AG220 Cooperative Ed Internship	1-6
BE152 Salesmanship	3
WE240 GIS/GPS	3

Animal Science

AG111 Animal Management	3
AG118 Principles of Livestock Selection I	2
AG119 Principles of Livestock Selection II	1
AG128 Animal Health and Nutrition	3
AG139 Farm Animal Reproduction	4
AG159 Equine Evaluation	1
AG166 Fundamentals of Livestock Nutrition	3
AG220 Cooperative Ed Internship	1-6

Equine Science

AG111 Animal Management	3
AG122 Introduction to Horsemanship	2
AG128 Animal Health & Nutrition	3
AG139 Farm Animal Reproduction	4
AG159 Equine Evaluation	1
AG165 Equine Evaluation II	1
AG166 Fundamentals of Livestock Nutrition	3
AG220 Cooperative Ed Internship	1-6
AG225 Basic Equitation	3
AG226 Advanced Equitation	3
AG228 Focused Equitation	3

Substitutions must be approved by the department chair.

AGRICULTURE & INDUSTRIAL TECHNOLOGY

Associate of Science - 62 Hours

Required General Education Courses 32 - 34 cr

Communication Requirement		9
CM101	English Composition I (3 cr)	
CM102	English Composition II (3 cr)	
CM115	Public Speaking (3 cr) or	
CM240	Interpersonal Communications (3 cr)	
Humanities Requirement (2 areas required)		6
Art	Humanities	
Music	Literature	
Theatre	Philosophy	
Foreign Language	History	
Mathematics Requirement		3
Mathematics General Education Course		
Natural Science Requirement (2 areas required)		8-10
Physical Science (4-5 cr)		
Biological Science (4-5 cr)		
Social/Behavioral Science Requirement (2 areas required)		6
Economics	Anthropology	
Psychology	Political Science	
Sociology	Geography	

Required Agriculture Courses 13 cr

AG101	Crop Science or	
AG150	Introduction to Horticulture	4
AG115	Animal Science	3
AG130	Principles of Ag Economics	3
AG210	Agriculture Advertising and Design	3

Elective Courses 11 cr

Agronomy		
AG101	Crop Science	4
AG102	Intro to Plant Pest Control	3
AG103	Plant and Soils for Crop Prod.	3
AG104	Soils	4
AG105	Range Management	3
AG106	Soil Classification and Evaluation	1
AG107	Agronomy ID and Experimentation	1
AG108	Environmental Quality	3
AG109	Environmental Quality Lab	1
AG112	Agronomy ID and Experimentation II	1
AG150	Introduction to Horticulture	4
AG164	Advanced Soil Class and Evaluation	1
Animal Science		
AG111	Animal Management	3
AG118	Principles of Livestock Selection I	2
AG119	Principles of Livestock Selection II	1
AG123	Beef Science	3
AG128	Animal Health and Nutrition	3
AG139	Farm Animal Reproduction	4

Business

AG132	Agriculture Management	3
AG134	Agricultural Marketing	3
AG217	Farm Computer Application I	3
BE100	Introduction to Business	3
BE152	Salesmanship	3
BE153	Personal Finance	3
BE160	Business Accounting	3
BE161	Accounting I	3
BE162	Accounting II	3
BE188	Principles of Advertising	3
MG102	Introduction to Entrepreneurship	3

Communications

JN100	Mass Media in Society	3
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Equine

AG122	Introduction to Horsemanship	2
AG125	Horse Science	3
AG159	Equine Evaluation	1
AG165	Equine Evaluation II	1
AG166	Fundamentals of Livestock Nutrition	3
AG188	Varsity Sports: Equestrian/Rodeo I	1
AG189	Varsity Sports: Equestrian/Rodeo II	1
AG225	Basic Equitation	3
AG226	Advanced Equitation	3
AG228	Focused Equitation	3

Pre-Veterinarian

EC101	Principles of Macroeconomics	3
MA112	Trigonometry	3
MA114	Elementary Statistics	3
SC110	Principles of Biology I	5
SC111	Microbiology Lecture	3
SC112	Microbiology Lab	2
SC131	Chemistry I	5
SC132	Chemistry II	5
SC140	College Physics I	5
SC141	College Physics II	5
SC151	Principles of Biology II	5

Additional Electives

AG220	Cooperative Ed Internship	1-6
WE240	GIS/GPS	3

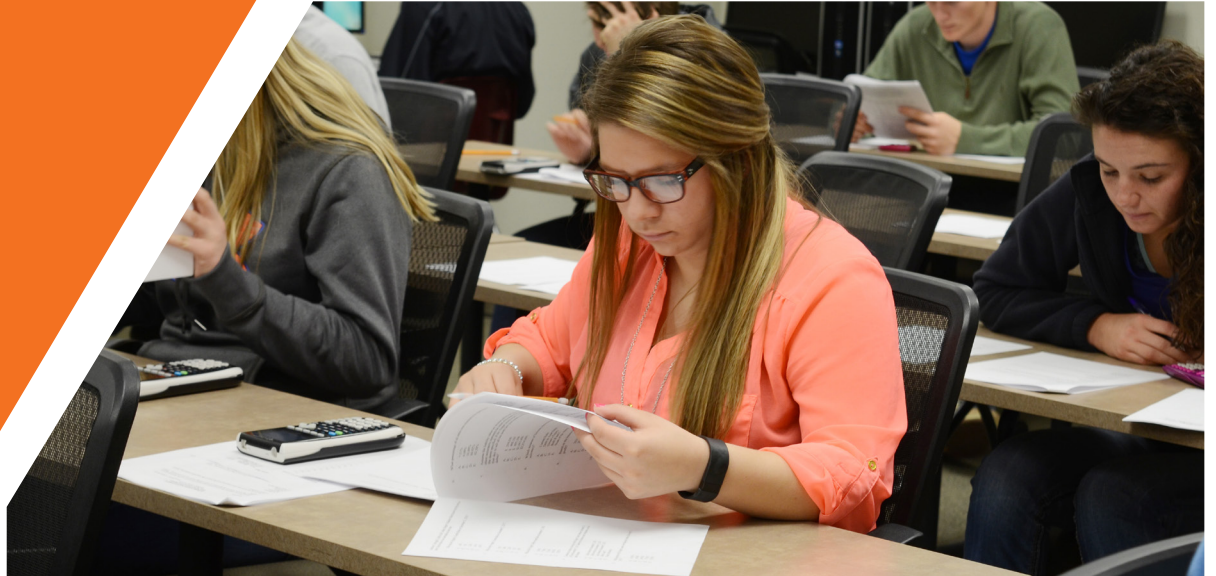
Open Electives 4-6 cr

Focus Areas:

**General Business,
Accounting, Marketing,
Office Management,
Business Administration,
Economics**

BUSINESS

Department Chair: Shelly Farha
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Potential Careers:

- Accountant
- Payroll Manager
- Management
- Human Resource Manager
- Entrepreneur
- Sale Representative
- Marketing Analyst

Program Learning Outcomes:

Associate of General Studies:

1. Demonstrate business literacy
2. Identify business topics through critical thinking.

Associate of Arts Degree:

1. Demonstrate business literacy.
2. Demonstrate the ability to think critically about business topics.
3. Demonstrate the ability to perform a business function.

DEGREES & CERTIFICATES

Associate of General Studies..... A.G.S. - 62 hours

Associate of Arts..... A.A. - 62 hours

BUSINESS

Associate of General Studies 62 Hours

Required General Education Courses		25 cr	Elective Courses		21 cr
<i>Communication Requirement</i>		6	BE115	Business Math	3
CM101 English Composition I (3 cr)			BE121	Business Communications	3
CM115 Public Speaking (3 cr) or			BE139	Basic Personal Finance	1
CM240 Interpersonal Communications (3 cr)			BE152	Salesmanship	3
<i>Humanities Requirement</i>		3	BE153	Personal Finance	3
Art	Humanities		BE154	Business Law	3
Music	Literature		BE155	Marketing	3
Theatre	Philosophy		BE160	Business Accounting	3
Foreign Language	History		BE161	Accounting I	3
<i>Mathematics Requirement</i>		3	BE162	Accounting II	3
Mathematics General Education Course or			BE165	Computerized Accounting	3
MA110 Intermediate Algebra (3 cr)			BE166	Payroll Accounting	3
<i>Natural Science Requirement</i>		4	BE170	Business Statistics	3
Physical Science w/Lab or			BE185	Human Resource Management	3
Biological Science w/Lab			BE188	Principles of Advertising	3
<i>Social/Behavioral Science Requirement</i>		6	BE210	Leadership Development	3
EC101 Principles of Macroeconomics (3 cr)			BE220	Cooperative Ed Internship	3
(1 additional area required) (3 cr)			CA221	Job Search	1
Anthropology	Geography		CS108	Computer Applications	3
Psychology	Political Science		EC102	Principles of Microeconomics	3
Sociology			MA115	General Calculus	3
<i>General Education Open Elective Course</i>		3	MG101	Management Principles	3
			MG102	Introduction to Entrepreneurship	3
			PE141	Personal Wellness	3
			PE250	Stress Management	3
Required Business Courses		6 cr	Open Electives		10 cr
BE100	Introduction to Business	3			
BE160	Business Accounting or				
BE161	Accounting I	3			



BUSINESS

Associate of Arts 62 Hours

Required General Education Courses 31 cr

<i>Communication Requirement</i>	9
CM101 English Composition I (3 cr)	
CM102 English Composition II (3 cr)	
CM115 Public Speaking (3 cr) or	
CM240 Interpersonal Communications (3 cr)	
<i>Humanities Requirement (2 areas required)</i>	6
Art Humanities	
Music Literature	
Theatre Philosophy	
Foreign Language History	
<i>Mathematics Requirement</i>	3
Mathematics General Education Course	
<i>Natural Science Requirement (1 area required)</i>	4-5
Physical Science (4-5 cr)	
Biological Science (4-5 cr)	
<i>Social/Behavioral Science Requirement</i>	6
EC101 Principles of Macroeconomics (3 cr)	
(1 additional area required) (3 cr)	
Anthropology Geography	
Psychology Political Science	
Sociology	
<i>Open General Education Elective</i>	3

Elective Courses 12 cr

Business	
BE115 Business Math	3
BE121 Business Communications	3
BE152 Salesmanship	3
BE153 Personal Finance	3
BE154 Business Law	3
BE155 Marketing	3
BE160 Business Accounting	3
BE165 Computerized Accounting	3
BE166 Payroll Accounting	3
BE170 Business Statistics	3
BE185 Human Resource Management	3
BE188 Principles of Advertising	3
BE210 Leadership Development	3
BE220 Cooperative Ed Internship	2
MG101 Management Principles	3
MG102 Introduction to Entrepreneurship	3
Additional Electives	
CA221 Job Search	1
CS108 Computer Applications	3
MA115 General Calculus	3
SC Science Gen Ed Course w/Lab	4-5
SS Social Science Gen Ed Course	3

Open Electives 7 cr

Required Business Courses 12 cr

BE100 Introduction to Business	3
BE161 Accounting I	3
BE162 Accounting II	3
EC102 Principles of Microeconomics	3



Focus Areas:

**Journalism,
Mass Communications,
Graphic Design, English,
Literature, Drama, Speech**

COMMUNICATIONS

Department Chair: Brandon Galm
brandon.galm@cloud.edu •• 785.243.1435, ext.



Potential Careers:

- Radio Station News Director
- Journalist
- Web Designer
- Graphic Designer
- TV Reporter

Program/General Education Learning Outcomes:

1. Recognize and apply communication conventions and strategies appropriate to a written or spoken discourse.
2. Identify and evaluate the core elements of both written and spoken discourses.
3. Respond thoughtfully with evidence to complex situations using written or spoken forms.
4. Ethically and coherently synthesize sources in written or spoken form.

DEGREES & CERTIFICATES

Associate of Arts..... A.A. - 62 hours

COMMUNICATIONS

Associate of Arts 62 Hours

Required General Education Courses 31 cr

<i>Communication Requirement</i>	9
CM101 English Composition I (3 cr)	
CM102 English Composition II (3 cr) or	
CM106 Creative Writing (3 cr)	
CM115 Public Speaking (3 cr)	

<i>Humanities Requirement (2 areas required)</i>	6
CM121 Introduction to Literature (3 cr)	
(1 additional area required) (3 cr)	
Art Humanities	
Music History	
Theatre Philosophy	
Foreign Language	

<i>Mathematics Requirement</i>	3
Mathematics General Education Course	

<i>Natural Science Requirement (1 area required)</i>	4-5
Physical Science (4-5 cr)	
Biological Science (4-5 cr)	

<i>Social/Behavioral Science Requirement (2 areas required)</i>	6
Economics Anthropology	
Psychology Political Science	
Sociology Geography	

<i>Open General Education Elective</i>	3
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Required Communications Courses 6 cr

CM240 Interpersonal Communication	3
Choose 1 of the Following	3
CM123 American Literature II (3 cr)	
CM124 World Literature & the Human Experience (3 cr)	
CM140 Theatre Appreciation (3 cr)	
JN100 Mass Media in Society (3 cr)	

Elective Courses 9 cr

Art	
AR130 Drawing I	3
AR140 Painting I	3

English	
CM102 English Composition II	3
CM106 Creative Writing I	3
CM107 Creative Writing II	3
CM120 Survey of Technical Writing	3
CM122 American Literature I	3
CM123 American Literature II	3
CM124 World Literature & the Human Experience	3
CM125 Literature for Children	3
CM127 The Short Story	3
CM157 Mass Media Production I	3

FL111 Spanish I	4
HI108 Women in American Society	3
PH100 Introduction to Philosophy	3

Communications

AR120 Design I	3
AR121 Graphic Design I	3
AR129 Introduction to Digital Photography	3
BE152 Salesmanship	3
BE155 Marketing	3
CM139 Sports Broadcasting	3
CM157 Mass Media Production I	3
CM158 Mass Media Production II	3
CS104 Introduction to Website Design	3
CS107 Graphic Software Applications	3
JN100 Mass Media in Society	3
JN101 Basic Media Writing	3
JN140 Beyond Web 2.0: Social Media as Identity	3

Music

MU100 Music Appreciation	3
MU102 World Music	3
MU103 History of Rock Music	3
MU110 Harmony and Ear Training I	4
MU111 Harmony and Ear Training II	4
MU130 Applied Music: Voice	1
MU132 Applied Music: Piano	1
MU146 Chamber Singers	1
MU160 Concert Choir	1

Theatre

CM140 Theatre Appreciation	3
CM141 Introduction to Acting	3
CM142 Acting I	3
CM143 Play Production	3
CM146 Play Production II	3
CM148 American Cinema Appreciation	3

Open Electives 16 cr

Focus Areas:

**Elementary Education,
Secondary Education,
Agriculture Education,
Early Childhood Education**

EDUCATION

Department Chair: Spencer Farha
safarha@cloud.edu •• 785.243.1435, ext. 269



Potential Careers:

- **Elementary School Teacher**
- **High School Teacher**
- **College Professor**
- **Principal/Superintendent**
- **Classroom Paraprofessional**

Program Learning Outcomes:

Education:

1. Prepare effective institution plans, appropriate for content and grade level.
2. Analyze sample instructional scenarios using modern pedagogical research.
3. Formulate an educational philosophy that incorporates responsible behaviors, relationships, and environments.

DEGREES & CERTIFICATES

Associate of Arts..... A.A. - 62 hours

Early Childhood Education16-hour certificate

Early Childhood Education30-hour certificate

EDUCATION

Associate of Arts 62 Hours

Minimum General Education Required Courses 31 cr

<i>Communication Requirement</i>	9
CM101 English Composition I (3 cr)	
CM102 English Composition II (3 cr)	
CM115 Public Speaking (3 cr)	

<i>Humanities Requirement (2 areas required)</i>	6
Art Humanities	
Music Literature	
Theatre Philosophy	
Foreign Language History	

<i>Mathematics Requirement</i>	3
Mathematics General Education Course	

<i>Natural Science Requirement (1 area required)</i>	4-5
Physical Science w/Lab (4-5 cr)	
Biological Science w/Lab (4-5 cr)	

<i>Social/Behavioral Science Requirement (2 areas required)</i>	6
SS101 General Psychology (3 cr)	
(1 additional area required) (3 cr)	
Anthropology Economics	
Geography Political Science	
Sociology	

<i>Open General Education Elective</i>	3
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Required Education Courses 7 cr

ED100 Introduction to Education	3
ED101 Introduction to Education Practicum	1
SS105 Human Growth & Development	3

Elective Courses 12 cr

Agriculture

AG101 Crop Science	4
AG104 Soils	4
AG115 Animal Science	3
AG130 Principles of Ag Economics	3
AG210 Agriculture Advertising & Design	3

Art

AR100 Art Appreciation	3
AR110 Ceramics	3
AR120 Design I	3
AR130 Drawing I	3
AR131 Drawing II	3
AR140 Painting I	3

Communications and Theatre

AR129 Introduction to Digital Photography	3
CM106 Creative Writing I	3
CM107 Creative Writing II	3
CM120 Survey of Technical Writing	3
CM121 Introduction to Literature	3
CM122 American Literature I	3

CM123 American Literature II	3
CM124 World Literature & the Human Experience	3
CM125 Literature for Children	3
CM127 The Short Story	3
CM139 Sports Broadcasting	3
CM140 Theatre Appreciation	3
CM157 Mass Media Production I	3
CM158 Mass Media Production II	3
CS107 Graphic Software Applications	3
CS108 Computer Applications	3
JN100 Mass Media in Society	3
JN101 Basic Media Writing	3
JN140 Beyond Web 2.0: Social Media as Identity	3

Early Childhood Education

HE150 Early Childhood Education	3
HE151 Early Childhood Education Lab	1
HE152 Interactive Techniques with Young Children	3
HE153 Creative Activities for Young Children	3
HE154 Creative Activities for Young Children Lab	1
HE155 Parents, Providers & Community Relationships	3
HE156 Developmental Program Planning for Young Children Over 2.5	3
HE157 Developmental Program Planning for Young Children Over 2.5 Lab	1
HE160 Child Care Administration and Organization	3
HE161 Health and Nutrition for Young Children	3
HE162 Childcare Management	1
HE164 Developmental Program Planning for Young Children Under 2.5	3
HE165 Developmental Program Planning for Young Children Under 2.5 Lab	1

Health and Physical Education

PE131 First Aid & Safety	3
PE136 Theory of Coaching	3
PE141 Personal Wellness	3
PE146 Concepts of Team Sports	3

History

HI120 World History I	3
HI121 World History II	3
HI122 U. S. History I	3
HI123 U. S. History II	3
HI124 Introduction to History	3
SS140 U. S. Government: National	3
SS141 U. S. Government: State & Local	3
SS142 Current Political Issues	3

Math

MA112 Trigonometry	3
MA114 Elementary Statistics	3
MA120 Analytic Geometry & Calculus I	5
MA121 Analytic Geometry & Calculus II	5

EDUCATION

Associate of Arts (Con't)

Music

MU100	Music Appreciation	3
MU102	World Music	3
MU103	History of Rock Music	3
MU104	Cloud County Community Chorale	1
MU110	Harmony and Ear Training I	4
MU111	Harmony and Ear Training II	4
MU112	Harmony and Ear Training III	4
MU113	Harmony and Ear Training IV	4
MU117	College Band I	1
MU118	College Band II	1
MU119	College Band III	1
MU126	Concert Band	1
MU127	Jazz Ensemble	1
MU130	Applied Music: Voice I	1
MU134	Applied Music: Voice II	1
MU137	Applied Music: Voice III	1
MU131	Applied Music: Instrument I	1
MU135	Applied Music: Instrument II	1
MU138	Applied Music: Instrument III	1
MU132	Applied Music: Piano I	1
MU136	Applied Music: Piano II	1
MU139	Applied Music: Piano III	1
MU146	Chamber Singers I	1
MU147	Chamber Singers II	1
MU148	Chamber Singers III	1

Science

SC111	Microbiology Lecture	3
SC112	Microbiology Lab	2
SC120	Human Anatomy & Physiology I	4
SC121	Human Anatomy & Physiology II	4
SC132	Chemistry II	5
SC140	College Physics I	5

Social Science

EC101	Principles of Macroeconomics	3
EC102	Principles of Microeconomics	3
GE101	World Geography	3
HI120	World History I	3
HI121	World History II	3
HI122	U. S. History I	3
HI123	U. S. History II	3
SS125	Intro to Cultural Anthropology	3

Open Electives **12 cr**



EDUCATION

EARLY CHILDHOOD EDUCATION

Program Learning Outcomes:

16-hour Certificate

1. Use the knowledge of young children's characteristics and needs to analyze all developmental domains regarding multiple influences on children's development and learning.
2. Create respectful, reciprocal relationships that support and empower families to be involved in their children's development and learning.

30-hour Certificate

1. Use the knowledge of young children's characteristics and needs to analyze all developmental domains regarding multiple influences on children's development and learning.
2. Create respectful, reciprocal relationships that support and empower families to be involved in their children's development and learning.
3. Apply systematic observations, documentation, and other effective assessment strategies in a responsible way to positively influence children's development and learning.

16-Hour Certificate

Required General Education Courses 3 cr

Choose 1 of the following:

- SS101 General Psychology (3 cr)
- SS015 Human Growth & Development (3 cr)

Required Early Childhood Education Courses 6 cr

Choose 2 of the following:

- HE150 Early Childhood Development (3 cr)
- HE153 Creative Activities for Young Children (3 cr)
- HE164 Development Program Planning for Young Children < 2.5 (3 cr)

Elective Courses 7 cr

HE144	Inclusive Early Childhood Education	3
HE150	Early Childhood Development	3
HE151	Early Childhood Development Lab	1
HE152	Interaction Techniques w/ Young Children	3
HE153	Creative Activities for Young Children	3
HE154*	Creative Activities for Young Children Lab	1
HE155	Parent, Providers & Community Relationships	3
HE156	Development Program Planning for Young Children > 2.5	3
HE157*	Development Program Planning for Young Children > 2.5 Lab	1
HE158*	Directed Field Experience	6
HE161	Health & Nutrition for Young Children	3
HE164	Developmental Program Planning for Young Children < 2.5	3
HE165	Developmental Program Planning for Young Children < 2.5 Lab	1
HE220	Cooperative Ed Internship	1
PE131	First Aid & Safety	3
HE147	Principles of the CDA Credential or	3
	FL111 Spanish I or	4
	SS106 Marriage and Family	3

*These labs will be in programs with preschool age children.

Due to the nature of the work with young children and their families, all students enrolled in the courses must have a physical on file with a negative TB test, and be cleared by the Child Abuse Registry through the Kansas Bureau of Investigation.

EDUCATION

EARLY CHILDHOOD EDUCATION

30-Hour Certificate

Required General Education Courses 9 cr

Choose 3 of the following:

- CM101 English Composition I (3 cr)
- CM115 Public Speaking (3 cr)
- MA110 Intermediate Algebra (3 cr) **or**
- Mathematics General Education Course (3 cr)
- Science General Education Course w/lab (4 cr)
- Social Science General Education Course (3 cr)

Required Early Childhood Education Courses 6 cr

Choose 2 of the following:

- HE150 Early Childhood Development (3 cr)
- HE153 Creative Activities for Young Children (3cr)
- HE164 Development Program Planning for Young Children < 2.5 (3 cr)

Elective Courses 15 cr

- HE144 Inclusive Early Childhood Education 3
- HE147 Principles of the CDA Credential 3
- HE150 Early Childhood Development 3
- HE151 Early Childhood Development Lab 1
- HE152 Interaction Techniques w/ Young Children 3
- HE153 Creative Activities for Young Children 3
- HE154* Creative Activities for Young Children Lab 1
- HE155 Parent, Providers & Community Relationships 3
- HE156 Development Program Planning for Young Children > 2.5 3
- HE157* Development Program Planning for Young Children > 2.5 Lab 1
- HE158* Directed Field Experience 6
- HE161 Health & Nutrition for Young Children 3
- HE164 Developmental Program Planning for Young Children < 2.5 3
- HE165 Developmental Program Planning for Young Children < 2.5 Lab 1
- HE220 Cooperative Education Internship 1-3
- PE131 First Aid & Safety 3
- FL111 Spanish I 4
- SS106 Marriage and Family 3

*These labs will be in programs with preschool age children.

Due to the nature of the work with young children and their families, all students enrolled in the courses must have a physical on file with a negative TB test, and be cleared by the Child Abuse Registry through the Kansas Bureau of Investigation.

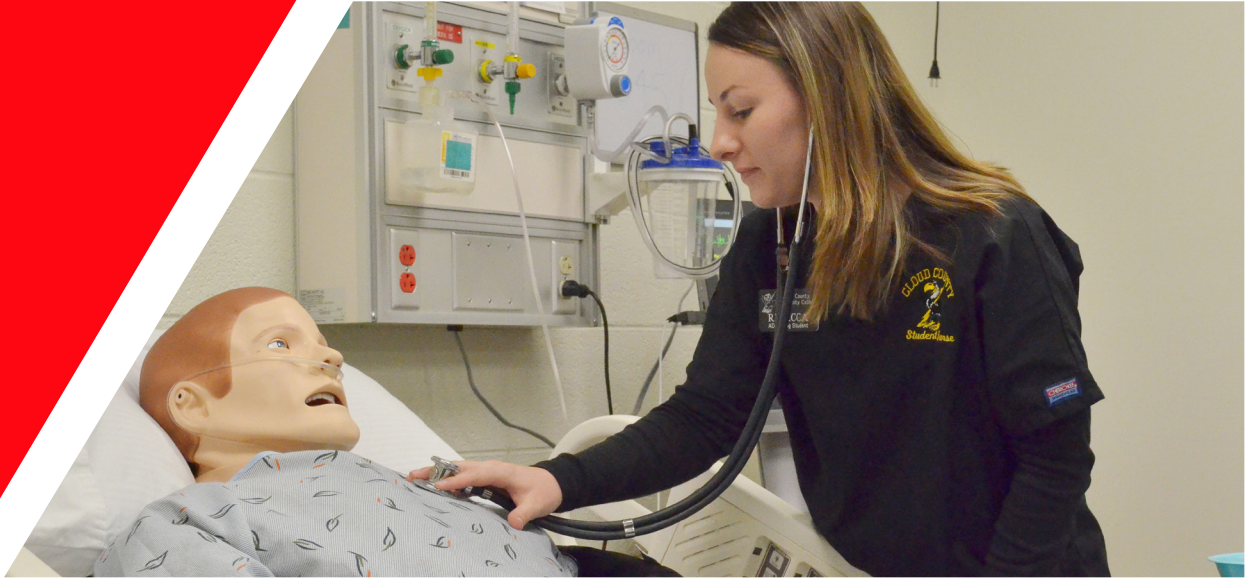


Focus Areas:

**Health,
Recreation,
Athletic Training,**

HEALTH & HUMAN PERFORMANCE

Department Chair: Spencer Farha
safarha@cloud.edu •• 785.243.1435, ext. 269



Potential Careers:

- **Coach**
- **Physical Education Instructor**
- **Athletic Trainer**
- **Nutritionist**

Program Learning Outcomes:

1. Design performance strategies related to skillful movement and physical activities.
2. Analyze capabilities and needs of clients/athletes to produce plans for exercise and health using appropriate investigation.
3. Formulate a philosophy or guiding vision that incorporate responsible behaviors, relationships, and environment towards health and human performance.

DEGREES & CERTIFICATES

Associate of Science A.S. - 62 hours

HEALTH AND HUMAN PERFORMANCE

Associate of Science 62 Hours

Required General Education Courses 32 cr

<i>Communication Requirement</i>	9
CM101 English Composition I (3 cr)	
CM102 English Composition II (3 cr)	
CM115 Public Speaking (3 cr) or CM240 Interpersonal Communications (3 cr)	
<i>Humanities Requirement (2 areas required)</i>	6
Art Humanities	
Music Literature	
Theatre Philosophy	
Foreign Language History	
<i>Mathematics Requirement</i>	3
Mathematics General Education Course	
<i>Natural Science Requirement (2 areas required)</i>	8-10
Physical Science w/Lab (4-5 cr)	
Biological Science w/Lab (4-5 cr)	
<i>Social/Behavioral Science Requirement (2 areas required)</i>	6
Economics Anthropology	
Psychology Political Science	
Sociology Geography	

Required Health and Human Performance Courses 9 cr

Choose 3 of the following:

BE210 Leadership Development	3
PE131 First Aid and Safety	3
PE136 Theory of Coaching	3
PE141 Personal Wellness	3
PE148 Introduction to Sports Management	3
PE150 Basic Care and Prevention of Athletic Injuries I	3
PE250 Stress Management	3

Elective Courses 9 cr

Physical Education

PE101 Team Sports I	1
PE102 Team Sports II	1
PE108 Archery	1
PE110 Total Fitness	1
PE126 Cheerleading I	1
PE127 Cheerleading II	1
PE128 Dance Team I	1
PE129 Dance Team II	1
PE130 Introduction to Physical Education	3
PE131 First Aid and Safety	3
PE135 Concepts of Physical Education	3
PE136 Theory of Coaching	3
PE141 Personal Wellness	3
PE143 Total Fitness II	1
PE144 Archery II	1
PE146 Concepts of Team Sports	3
PE148 Introduction to Sports Management	3
PE150 Basic Care and Prevention of Athletic Injuries I	3

PE151 Basic Care and Prevention of Athletic Injuries II	3
PE156 Principles of Strength & Conditioning	2
PE160 Varsity Sports: Baseball	1
PE161 Varsity Sports: Basketball	1
PE162 Varsity Sports: Track	1
PE165 Varsity Sports: Softball	1
PE167 Varsity Sports: Cross Country	1
PE168 Varsity Sports: Volleyball	1
PE169 Varsity Sports: Wrestling	1
PE185 Varsity Sports: Basketball II	1
PE250 Stress Management	3

Social Science

SS101 General Psychology	3
SS102 Abnormal Psychology	3
SS103 Social Psychology	3
SS105 Human Growth and Development	3
SS106 Marriage and Family	3
SS107 Human Sexuality	3
SS113 Human Relations	3
SS125 Introduction to Cultural Anthropology	3
SS127 Child Psychology	3
SS130 Introduction to Sociology	3
SS131 Cultural Diversity and Ethnicity	3
SS140 U.S. Government: National	3
SS141 U.S. Government: State and Local	3
SS201 Social Problems	3

Additional Electives

BE154 Business Law	3
BE155 Marketing	3
BE160 Business Accounting	3
BE161 Accounting I	3
BE162 Accounting II	3
BE210 Leadership Development	3
HE124 Nutrition	3
MG101 Management Principles	3
MA112 Trigonometry	3
PE220 Cooperative Ed Internship	2
SC120 Human Anatomy and Physiology I	4
SC121 Human Anatomy and Physiology II	4
SC125 Human Body Dissection	1
SC130 General Chemistry	5
SC131 Chemistry I	5
SC140 College Physics I	5

Open Electives 12 cr

Focus Areas:

**Art, History, Music,
Philosophy, Theatre,
Religion**

HUMANITIES/ FINE ARTS

Department Chair: Amy Kern
akern@cloud.edu • 785.243.1435, ext. 326



Potential Careers:

- **Graphic Designer**
- **Artists**
- **Attorney**
- **Event Coordinator**
- **Musician**
- **Music & Art Educators**

Program/General Education Learning Outcomes:

1. Explain the interrelated nature of humanities: how humanities shapes cultures and how the cultures shapes humanities.
2. Demonstrate how the humanities can allow for introspection, self-discovery, and growth.

DEGREES & CERTIFICATES

Associate of Arts.....A.A. - 62 hour

HUMANITIES AND FINE ARTS

Associate of Arts 62 Hours

Minimum General Education Required Courses 31 cr

<i>Communication Requirement</i>	9
CM101 English Composition I (3 cr)	
CM102 English Composition II (3 cr)	
CM115 Public Speaking (3 cr) or	
CM240 Interpersonal Communications (3 cr)	
<i>Humanities Requirement (2 areas required)</i>	6
One from the following area:	
Art	
Music	
Theatre	
One from this second area:	
Foreign Language	
History	
Humanities	
Literature	
Philosophy	
<i>Mathematics Requirement</i>	3
Mathematics General Education Course	
<i>Natural Science Requirement (1 area required)</i>	4-5
Physical Science w/Lab (4-5 cr)	
Biological Science w/Lab (4-5 cr)	
<i>Social/Behavioral Science Requirement (2 areas required)</i>	6
Economics	Anthropology
Psychology	Political Science
Sociology	Geography
<i>Open General Education Elective</i>	3

Required Humanities and Fine Arts Courses 6-7 cr

HI120 World History I or	3
HI121 World History II	
Choose from one of the following:	3-4
AR120 Design I (3 cr)	
CM106 Creative Writing I (3 cr)	
HI122 U.S. History I (3 cr)	
HI123 U.S. History II (3 cr)	
MU110 Harmony & Ear Training I (4 cr)	

Elective Courses 14-15 cr

Art	
AR100 Art Appreciation	3
AR110 Ceramics I	3
AR111 Ceramics II	3
AR120 Design I	3
AR121 Graphic Design I	3
AR122 Graphic Design II	3
AR129 Introduction to Digital Photography	3
AR130 Drawing I	3
AR131 Drawing II	3
AR140 Painting I	3
AR141 Painting II	3

Communications

CM106 Creative Writing I	3
CM107 Creative Writing II	3
CM122 American Literature	3
CM123 American Literature II	3
CM124 World Literature & the Human Experience	3
CM125 Literature for Children	3
CM127 The Short Story	3
CM140 Theatre Appreciation	3
CM148 American Cinema Appreciation	3
CS104 Introduction to Website Design	3
CS107 Graphic Software Applications	3
CS108 Computer Applications	3
JN140 Beyond Web 2.0: Social Media as Identity	3

History

HI108 Women in American Society	3
HI120 World History I	3
HI121 World History II	3
HI122 U.S. History I	3
HI123 U.S. History II	3
HI124 Introduction to History	3

Music

MU100 Music Appreciation	3
MU102 World Music	3
MU103 History of Rock Music	3
MU104 Cloud County Community Chorale	1
MU110 Harmony & Ear Training I	4
MU111 Harmony & Ear Training II	4
MU112 Harmony & Ear Training III	4
MU113 Harmony & Ear Training IV	4
MU117 College Band	1
MU118 College Band II	1
MU119 College Band III	1
MU126 Concert Band	1
MU127 Jazz Ensemble	1
MU130 Applied Music: Voice I	1
MU134 Applied Music: Voice II	1
MU137 Applied Music: Voice III	1
MU131 Applied Music: Instrument I	1
MU135 Applied Music: Instrument II	1
MU138 Applied Music: Instrument III	1
MU132 Applied Music: Piano I	1
MU136 Applied Music: Piano II	1
MU139 Applied Music: Piano III	1

Philosophy

PH100 Introduction to Philosophy	3
PH105 Ethics	3
RE104 World Religion	3

HUMANITIES AND FINE ARTS

Associate of Arts (Con't)

Education

ED100	Introduction to Education	3
ED101	Introduction to Education Practicum	1-2

Foreign Language

FL111	Spanish I	4
FL112	Spanish II	4

Open Electives **10 cr**



Focus Areas:

Students may explore courses from any of the academic departments to help identify their preferred areas of interest

INTERDISCIPLINARY STUDIES

Division Dean: Don Benjamin
don.benjamin@cloud.edu •• 785.243.1435, ext. 274



Students with a degree are more competitive for employment opportunities.

Program/General Education Learning Outcomes:

1. Identify the core elements of both written and spoken arguments and evaluate the quality of those arguments.
2. Critically analyze events through a scientific lens.
3. Demonstrate understanding of the humanities in a diverse, global context.
4. Demonstrate critical thinking in understanding of psychological and social aspects of the human experience.
5. Accurately interpret, validate, and communicate the result.

DEGREES & CERTIFICATES

Applied Technologies.....	A.A.S. - 62 hours	Associate of Arts.....	A.A. - 62 hours
Associate of General Studies.....	A.G.S. - 62 hours	Associate of Science	A.S. - 62 hours

INTERDISCIPLINARY STUDIES

Applied Technologies Associate of Applied Science 62 Hours

The Associate of Applied Science offers an opportunity for students to continue technical coursework from two or more approved technical programs. This will allow students to gain skills in emerging occupations or meet employer needs by blending courses from multiple technical disciplines into a single approved degree program. This is an individualized program of study between the student and their advisor using courses from Kansas Board of Regents Career and Technical approved programs.

Required General Education Courses 18 cr

<i>Communication Requirement</i>	3
CM101 English Composition 1 or CM120 Survey of Technical Writing	
CM115 Public Speaking or CM240 Interpersonal Communications	3
<i>Humanities Gen Ed Course</i>	3
<i>Mathematics Requirement</i>	3
Mathematics General Education Course or MA110 Intermediate Algebra (3 cr) or MA104 Technical Math (3 cr)	

<i>Natural Science Requirement</i>	3
Physical Science or Biological Science	

<i>Social/Behavioral Science Requirement</i> (1 area required)	3
Anthropology Economics Geography Psychology Political Science Sociology	

Open Electives 44 cr



INTERDISCIPLINARY STUDIES

AGS, AA, and AS Degrees
62 Hours

Associate of General Studies

Required General Education Courses 25 cr

Communication Requirement 6

- CM101 English Composition I (3 cr)
CM115 Public Speaking (3 cr) **or**
CM240 Interpersonal Communications (3 cr)

Mathematics Requirement 3

- Mathematics General Education Course **or**
MA110 Intermediate Algebra (3 cr)

Humanities Requirement 3

- | | |
|------------------|------------|
| Art | Humanities |
| Music | Literature |
| Theatre | Philosophy |
| Foreign Language | History |

Social/Behavioral Science Requirement 3

- | | |
|------------|-------------------|
| Economics | Anthropology |
| Psychology | Political Science |
| Sociology | Geography |

Humanities or Social Science Requirement 3
(Must be from second area)

Natural Science Requirement 4

- Physical Science w/lab **or**
Biological Science w/lab

Open General Education Elective 3

Open Electives 37 cr

Any non-developmental course can be used to fulfill the requirements of the Associate of General Studies degree.

Associate of Arts

Minimum General Education Required Courses 31 cr

Communication Requirement 9

- CM101 English Composition I (3 cr)
CM102 English Composition II (3 cr) **or**
CM106 Creative Writing (3 cr)
CM115 Public Speaking (3 cr) **or**
CM240 Interpersonal Communications (3 cr)

Humanities Requirement (2 areas required) 6

- | | |
|------------------|------------|
| Art | Humanities |
| Music | Literature |
| Theatre | Philosophy |
| Foreign Language | History |

Mathematics Requirement 3

- Mathematics General Education Course

Natural Science Requirement (1 area required) 4-5

- Physical Science w/Lab (4-5 cr)
Biological Science w/Lab (4-5 cr)

Social/Behavioral Science Requirement 6
(2 areas required)

- | | |
|------------|-------------------|
| Economics | Anthropology |
| Psychology | Political Science |
| Sociology | Geography |

Open General Education Elective 3

Open Electives 31 cr

Any non-technical, non-developmental course can be used to fulfill the requirements of the Associate of Arts degree.

Associate of Science

Required General Education Courses 32 cr

Communication Requirement 9

- CM101 English Composition I (3 cr)
CM102 English Composition II (3 cr) **or**
CM106 Creative Writing (3 cr)
CM115 Public Speaking (3 cr) **or**
CM240 Interpersonal Communications (3 cr)

Humanities Requirement (2 areas required) 6

- | | |
|------------------|------------|
| Art | Humanities |
| Music | Literature |
| Theatre | Philosophy |
| Foreign Language | History |

Mathematics Requirement 3

- Mathematics General Education Course

Natural Science Requirement (2 areas required) 8-10

- Physical Science w/Lab (4-5 cr)
Biological Science w/Lab (4-5 cr)

Social/Behavioral Science Requirement 6
(2 areas required)

- | | |
|------------|-------------------|
| Economics | Anthropology |
| Psychology | Political Science |
| Sociology | Geography |

Open Electives 30 cr

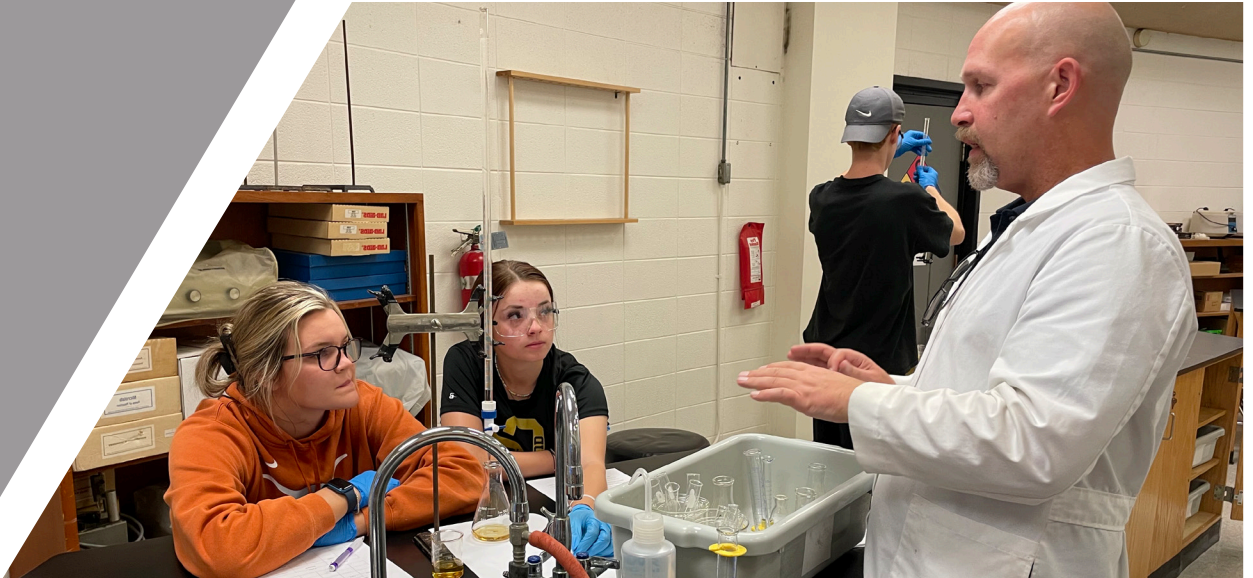
Any non-technical, non-developmental course can be used to fulfill the requirements of the Associate of Science degree.

Focus Areas:

**Architecture,
Engineering,
Mathematics,
Engineering Technology,
Actuary Science**

MATHEMATICS & ENGINEERING

Department Chair: Mark Whisler
mwhisler@cloud.edu • 785.243.1435, ext. 221



Potential Careers:

- Data Analyst
- Civil Engineer
- Chemical Engineer
- Electrical or Mechanical Engineer
- Actuary
- Architect

Program/General Education Learning Outcomes:

1. Recognize the mathematical concepts that are applicable to a scenario.
2. Apply technology in analysis.
3. Accurately interpret, validate, and communicate the result.

DEGREES & CERTIFICATES

Associate of Science A.S. - 62 hours

MATHEMATICS AND ENGINEERING

Associate of Science
62 Hours

Required General Education Courses	33 cr	Elective Courses	10 cr
<i>Communication Requirement</i>	9	Math	
CM101 English Composition I (3 cr)		MA114 Elementary Statistics	3
CM102 English Composition II (3 cr)		MA122 Analytic Geometry and Calculus III	5
CM115 Public Speaking (3 cr) or		MA123 Differential Equations	4
CM240 Interpersonal Communications (3 cr)		MA220 Cooperative Education Internship	1-2
<i>Humanities Requirement (2 areas required)</i>	6	Science	
Art Humanities		SC104 Geology	4
Music Literature		SC107 Meteorology	4
Theatre Philosophy		SC132 Chemistry II	5
Foreign Language History		SC140 College Physics I	5
<i>Mathematics Requirement</i>	3	SC141 College Physics II	5
Mathematics General Education Course		SC142 University Physics I	5
<i>Natural Science Requirement (2 areas required)</i>	9	SC143 University Physics II	5
SC131 Chemistry I (5 cr)		SC151 Principles of Biology II	5
*Biological Science (4 cr)		Business	
<i>*(Physical Science majors should consult their advisor about a substitution of a physical science)</i>		BE100 Introduction to Business	3
<i>Social/Behavioral Science Requirement</i>	6	BE153 Personal Finance	3
EC101 Principles of Macroeconomics (3 cr)		BE160 Business Accounting	3
(1 additional area required) (3 cr)		Additional Electives	
Anthropology Geography		CM121 Introduction to Literature	3
Psychology Political Science		CS108 Computer Applications	3
Sociology		CS155 Networking and Computer Technology	3
		Open Electives	6 cr

Required Mathematics and Engineering Courses 13 cr

Choose 13 hours from the following:

MA112 Trigonometry	3
MA120 Analytic Geometry and Calculus I	5
MA121 Analytic Geometry and Calculus II	5
SC142 University Physics I	5
SC143 University Physics II	5



Focus Areas:

**Nursing (ADN),
Partnership AAS/BSN
Nurse's Aide
Medication Aide
EMT
Pharmacy Technician
Pre-BSN**

NURSING & ALLIED HEALTH

Stefanie Perret, Director
of Nursing & Allied Health
nursing@cloud.edu •• 785.243.1435, ext.



Potential Careers:

- **Registered Nurse**
- **CNA**
- **CMA**
- **EMT**
- **Pharmacy Technician**

Program Learning Outcomes - Nursing:

1. Integrate caring behaviors in practicing the art and science of nursing within a diverse population.
2. Implement professional standards and scope of practice within legal, ethical, and regularity framework.
3. Collaborate with clients and members of the inter-professional health care team to optimize client outcomes.
4. Formulate safe and effective clinical judgments, guided by the nursing process, clinical reasoning, and evidence-based practices.
5. Provide leadership in the management of care to meet client needs using available resources and current technology.
6. Generate teaching and learning processes to promote and maintain health and to reduce risks for global populations.
7. Demonstrate effective communication methods to manage client needs and to interact with other health care team members.

DEGREES & CERTIFICATES

Certified Nurse Aide.....	5 hours	Nursing - Generic Track.....	A.A.S. - 67 hours
Certified Medication Aide	5 hours	Nursing - LPN to ADN.....	A.A.S. - 67 hours
Emergency Medical Technician	16 hours	Associate of Science	A.S. - 62 hours
Pharmacy Technician	16 hours	Nursing A.A.S./B.S.N. Partnership Available	

NURSING

The ADN program at Cloud County Community College (CCCC) prepares the graduates to practice as registered nurses upon successful completion of the National Council Licensure Examination (NCLEX-RN®). They are qualified to enter a professional position as a generalist in a variety of care settings with clients of all ages from diverse populations. CCCC nursing graduates are also prepared to continue studies at colleges or universities that offer bachelor's degrees in nursing. The Associate Degree in Nursing program does not prepare persons for teaching positions. The generic program option is for students with no prior nursing license, with the ability and resources, whose career goal is registered nursing. The advanced standing program option is for LPNs, whose career goal is to become a registered nurse. Upon completion, graduates are awarded an Associate of Applied Science degree and are eligible to take the licensure examination for registered nurses, NCLEX-RN®.

Contact:

Stefanie N. Perret, MSN, RN
Director of Nursing & Allied Health
785-243-1435 x 332 • nursing@cloud.edu

Degree Information

The Associate of Applied Science Degree in Nursing prepares graduates to take the RN licensure exam (NCLEX-RN) and to practice as Registered Nurses.

Recommended Course Sequence:

Generic Traditional Option

Certified Nursing Assistant (CNA) - current certification or equivalent.
Prerequisites: SC126, SS101, SS105, MA110
First Semester: NR110, NR111, SC128
Second Semester: NR112, NR114, CM101
Third Semester: NR211, NR115, CM115 or CM240
Fourth Semester: NR 212, Humanities course

Advanced Standing Option

Prerequisite Courses: CM101, MA110, SS101, SS105, SC126, SC128
LPN Program Portfolio - Transfer 19 cr
First Semester: NR210, NR211, NR115, CM115 or CM240
Second Semester: NR212, Humanities course

Licensed as an LPN - May be a practical nursing student at the time of application but must be licensed prior to NR211 Lifespan Nursing III. Acceptance is provisional until Practical Nurse Licensure is confirmed.

NR courses are offered on both the Concordia

and the Geary County Campuses. Non-nursing courses are offered on the Concordia and Geary County Campuses, through Outreach at various locations and times, and on the Internet.

Additional Enrollment Requirements:

Physical Examination: The applicant must have satisfactory physical and mental health. A physical examination and health history are required after admission. All immunizations must be up-to-date.

CPR certification: Applicants shall provide evidence of current CPR certification at the professional level through the American Heart Association or American Red Cross.

Security Screening: A security screening will be completed prior to any clinical experience. Criminal conviction may jeopardize the ability to continue in the course and/or to obtain licensure.

Health Insurance: Students enrolled in the nursing program are required to carry health insurance as a clinical facility requirement. Proof of coverage must be on file in the nursing office. It is the student's responsibility to continue health insurance coverage throughout the nursing program.

Any health care cost incurred by the student is the responsibility of the student and is not the responsibility of CCCC or any of its clinical agencies. Students are **responsible for their own health care.**

Convictions or Disciplinary Action - Felony Crimes Against Persons are an automatic bar to Kansas nursing licensure as set by the Kansas legislature. It would require a law (statute) change by the Kansas legislature to allow licensure. Those actions are "as specified in article 34 of chapter 21 of the Kansas Statutes Annotated, prior to their repeal, or article 54 of chapter 21 of the Kansas Statutes annotated or K.S.A. 2019 Supp. 21-6104, 21-6325, 21-6326 or 21-6418, and amendments thereto." --Kansas Nurse Practice Act. Obtaining the Associate Degree in Nursing from Cloud County Community College does not guarantee licensure in any state, including Kansas. Information regarding grounds for disciplinary action pertaining to a Kansas license is addressed in regulation KSA 65-1120.

Literacy Screening: Applicants must have completed General Psychology, Human Growth and Development, Intermediate

Algebra and Anatomy and Physiology prior to enrollment in the NR courses. Students with English as a second language are required to take the TOEFL* exam to validate proficiency of the English language. **If a student applicant has successfully completed CM101 English Composition I, a TOEFL score is not required.*

Approved by:

Kansas State Board of Nursing
Landon State Office Building
900 SW Jackson, Suite 1051
Topeka, KS 66612-1230
785-296-4929 ksbn.org

Accredited by:

Accrediting Commission for Education in Nursing (ACEN)
3390 Peachtree Road NE, Suite 1400
Atlanta, GA 30326
404-975-5000, fax 404-975-5020

Student Organizations: Student Nurse Organization

Nursing AAS/BSN Partnership: The Community College Nursing Partnership offers the comfort and convenience of staying at CCCC while pursuing both the Associate Degree in Nursing (ADN) and Bachelor of Science in Nursing (BSN). The program bypasses the traditional prelicensure associate degree nursing step. Instead, this curriculum makes it possible for students to complete the ADN (AAS) and BSN through on-campus courses at CCCC and online courses through the University of Kansas (KU) or Ottawa University. After completing the program, eligible students are awarded both an AAS and a BSN, and are eligible to take the National Council Licensing Exam (NCLEX-RN).

Gainful Employment: The salary for new graduates of ADN programs entering the work field in acute care in Kansas is approximately \$40,500 - \$65,000. Salary will vary by specialty and location. The Kansas Dept of Health and Welfare states that a serious nursing shortage exists in Kansas for registered nurses. Graduates from the nursing program are consistently employed at a nearly 100% rate. [Http://www.kdheks.gov/ches/](http://www.kdheks.gov/ches/).

Transfer Institution Guide: A student who is interested in pursuing a baccalaureate degree should consult a CCCC advisor and the transfer guide and catalog of the four-year institution.

NURSING & ALLIED HEALTH

ASSOCIATE DEGREE IN NURSING

Associate of Applied Science

67 Hours

Generic Track

LPN to ADN - Advanced Standing Track

General Education Required Courses 23 cr

<i>Communication Requirement</i>	6
CM101 English Composition I (3 cr)	
CM115 Public Speaking (3 cr) or	
CM240 Interpersonal Communications (3 cr)	

<i>Humanities Requirement (out of following areas)</i>	3
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Art	Humanities
Music	Literature
Theatre	Philosophy
Foreign Language	History

<i>Mathematics Requirement</i>	3
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MA110 Intermediate Algebra (3 cr) or	
Mathematics General Education Course	

<i>Natural Science Requirement</i>	5
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SC126 Anatomy & Physiology (5 cr) or	
SC120 Human Anatomy and Physiology I(4 cr) and	
SC121 Human Anatomy and Physiology II (4 cr)	

<i>Social/Behavioral Science Requirement</i>	6
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SS101 General Psychology (3 cr)	
SS105 Human Growth & Development (3 cr)	

Required Courses 44 cr

NR110 Health Assessment for Nurses	3
NR111 Life Span Nursing I	6
NR112 Life Span Nursing II	9
NR114 Pharmacology II	2
NR115 Pharmacology III	2
NR211 Life Span Nursing III	9
NR212 Life Span Nursing IV	9
NR128 Pathophysiology	4

CNA or equivalent.

Note:

General Education Courses must be completed with a "C" or better.
Nursing (NR) courses with a "B" or better.

General Education Required Courses 23 cr

<i>Communication Requirement</i>	6
CM101 English Composition I (3 cr)	
CM115 Public Speaking (3 cr) or	
CM240 Interpersonal Communications (3 cr)	

<i>Humanities Requirement (out of following areas)</i>	3
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Art	Humanities
Music	Literature
Theatre	Philosophy
Foreign Language	History

<i>Mathematics Requirement</i>	3
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MA110 Intermediate Algebra (3 cr) or	
Mathematics General Education Course	

<i>Natural Science Requirement</i>	5
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SC126 Anatomy & Physiology (5 cr) or	
SC120 Human Anatomy and Physiology I(4 cr) and	
SC121 Human Anatomy and Physiology II (4 cr)	

<i>Social/Behavioral Science Requirement</i>	6
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SS101 General Psychology (3 cr)	
SS105 Human Growth & Development (3 cr)	

Required Courses 44 cr

NR115 Pharmacology III	2
NR210 LPN to ADN Bridge	1
*NR211 Life Span Nursing III	9
NR212 Life Span Nursing IV	9
NR128 Pathophysiology	4
LPN Portfolio	19

*LPN license prior to NR211

Note:

General Education Courses must be completed with a "C" or better.
Nursing (NR) courses with a "B" or better.

NURSING & ALLIED HEALTH

Associate of Science 62 Hours

Required General Education Courses 33-34 cr

<i>Communication Requirement</i>	9
CM101 English Composition I (3 cr)	
CM102 English Composition II (3 cr)	
CM115 Public Speaking (3 cr) or	
CM240 Interpersonal Communications (3 cr)	
<i>Humanities Requirement (2 areas required)</i>	6
Art Humanities	
Music Literature	
Theatre Philosophy	
Foreign Language History	
<i>Mathematics Requirement</i>	3
Mathematics General Education Course	
<i>Natural Science Requirement (2 areas required)</i>	9-10
SC101 General Biology (4 cr) or	
SC110 Principles of Biology I (5 cr) or	
SC120 Human Anatomy & Physiology I (4 cr)	
SC130 General Chemistry (5 cr) or	
SC131 Chemistry I (5 cr)	
<i>Social/Behavioral Science Requirement (2 areas required)</i>	6
Economics Anthropology	
Psychology Political Science	
Sociology Geography	

Elective Courses 18-20 cr

Science	
SC103 Physical Science	5
SC110 Principles of Biology I	5
SC111 Microbiology Lecture	3
SC112 Microbiology Lab	2
SC120 Human Anatomy & Physiology I	4
SC121 Human Anatomy & Physiology II	4
SC125 Human Body Dissection	1
SC126 Anatomy & Physiology	5
SC128 Pathophysiology	4
SC131 Chemistry I	5
SC132 Chemistry II	5
SC140 College Physics I	5
SC141 College Physics II	5
SC142 University Physics I	5
SC143 University Physics II	5
SC151 Principles of Biology II	5

Additional Electives

AH197 Certified Nurse Aide	5
AH198 Certified Medication Aide	5
AH199 Home Health Aide	2
AR100 Art Appreciation	3
BE122 Medical Office Vocabulary	2

BE170 Business Statistics	3
BE210 Leadership Development	3
HE124 Nutrition	3
CM121 Introduction to Literature	3
CM122 American Literature I	3
CM123 American Literature II	3
CM124 World Literature & the Human Experience	3
CM140 Theatre Appreciation	3
CM148 American Cinema Appreciation	3
CS108 Computer Applications	3
GE101 World Geography	3
HE124 Nutrition	3
HI120 World History I	3
HI121 World History II	3
HI122 U.S. History I	3
HI123 U.S. History II	3
HU201 Humanities I	3
HU202 Humanities II	3
MA107 Medical Mathematics	1
MA112 Trigonometry	3
MA114 Elementary Statistics	3
MA115 General Calculus	3
MA120 Analytic Geometry and Calculus I	5
MA121 Analytic Geometry and Calculus II	5
MG102 Introduction to Entrepreneurship	3
MU100 Music Appreciation	3
MU102 World Music	3
MU103 History of Rock Music	3
NR220 Cooperative Ed Internship	1-4
PE131 First Aid and Safety	3
PE141 Personal Wellness	3
PE250 Stress Management	3
PH100 Introduction to Philosophy	3
SD100 College Skills	1
SS101 General Psychology	3
SS102 Abnormal Psychology	3
SS105 Human Growth & Development	3
SS106 Marriage and Family	3
SS125 Introduction to Cultural Anthropology	3
SS130 Introduction to Sociology	3

Open Electives 8-10 cr

NURSING & ALLIED HEALTH

ALLIED HEALTH

Program Learning Outcomes:

CNA, CMA, and HHA:

1. Follow safety and infection control procedures for protection of client, self, and others.
2. Recognize and report changes and abnormalities to nurse or primary care provider.
3. Provide considerate and respectful care of the client by complying with patient rights.
4. Follow HIPAA guidelines for the protection of confidentiality.

EMT:

1. Demonstrate the appropriate skills and knowledge to assist in a variety of medical emergencies.
2. Implement professional standards and scope of practice within legal, ethical, and regulatory frameworks.

Pharmacy Technician:

1. Apply the federal, state, and local laws, regulations and professional standards to pharmacy practice.
2. Follow safety and infection control procedures for protection of client, self, and others.
3. Perform math function, dosage calculation, and compounding techniques.
4. Utilize effective communication techniques with clients and members of the interdisciplinary healthcare team.

Certified Nurse Aide (CNA)

This course prepares the student with the basic knowledge and skills necessary to provide care to residents in adult care homes as well as a variety of healthcare settings. The student will learn how to provide basic care including activities of daily living as well as psycho-social needs. The CNA works under the supervision of a licensed nurse. Once the student successfully completes the 90-contact hour course, which includes 45 hours of didactic and 45 hours of clinical, they become eligible to take the Kansas State Certified Nurse Aide (CNA) Exam. After they successfully pass the state KDADS exam, they are added to the Kansas nurse aide registry as a certified nurse aide. The candidate must be 16 years of age by the end of the class. Criminal conviction may jeopardize eligibility for certification and/or employment.

Certified Medication Aide (CMA)

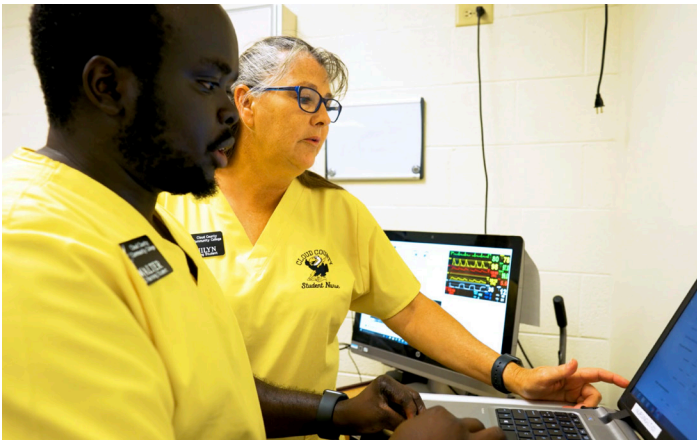
This course prepares the student with the basic knowledge and skills to administer medications and treatments to select age groups in an adult care home. The medication aide works under the supervision of a licensed nurse.

Once enrolled the student must successfully complete the 75-hour course. The course consists of 50 hours didactic and 25 hours clinical. Once they have successfully completed the course, they become eligible to take the Kansas State Medication Aide Certification Test (CMA). Successful completion of the state exam will result in the candidate being listed on the Kansas Nurse Aide Registry as a certified medication aide.

Per KDADS requirements, to take the class and become a Certified Medication Aide (CMA) in Kansas, an individual must hold a Kansas Certified Nurse Aide certification (without pending or current legal prohibitions), be 18 years old by the date of state testing and be screened for reading ability. The college requirement for screening is for the student to pass a reading test or have had a college level English class with a passing grade of "C". Also, eligible are qualified intellectual disability professional (QIDP) who can provide verification of employment as a QIDP.

Home Health Aide (HHA)

This course will provide fundamental knowledge of the aging process with emphasis on providing services essential to the physical, mental, and psycho-social well-being of clients in the home setting; incorporating basic care of clients with the instrumental activities of daily living in the home setting. The student will complete 30 hours of instruction following the Kansas Department for Aging and Disability Services curriculum.



NURSING & ALLIED HEALTH

ALLIED HEALTH

EMERGENCY MEDICAL TECHNICIAN

This course of study will provide the participant with the preparation necessary to test for certification as an Emergency Medical Technician in the State of Kansas. This is the initial course of instruction required for persons involved in providing emergency care. Areas covered include: the control of an accident scene, care of the patient prior to transport, preparation for transport, transport and care of the patient while en-route to the hospital, transfer of a patient to a hospital emergency department, communications, reporting, record keeping, and vehicle care. This Emergency Medical Technician course meets the course requirements of the Kansas Board of Emergency Medical Services as set forth in Kansas Administrative Regulations.

When taken with courses listed below, the student will be awarded a college-level certificate.

EMT LEVEL I

16-Hour Certificate

General Education Required Courses 3 cr

SS101	General Psychology	or	
	SS130	Introduction to Sociology	3

Required EMT Courses 10 cr

Required Course (10 credits)

AH163	Emergency Medical Technician	10
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Open Electives 3 cr

PHARMACY TECHNOLOGY

The Pharmacy Technology program prepares individuals, under the supervision of pharmacists, to prepare medications, provide medications and related assistance to patients, and manage pharmacy clinical and business operations. Includes instruction in medical and pharmaceutical terminology, principles of pharmacology and pharmaceutis, drug identification, pharmacy laboratory procedures, prescription interpretation, patient communication and education, safety procedures, record-keeping, measurement and testing techniques, pharmacy business operations, prescription preparation, logistics and dispensing operations, and applicable standards and regulations.

The 16-credit hour certificate is offered in the online course delivery format.

PHARMACY TECHNICIAN

16-Hour Certificate

General Education Required Courses 3 cr

<i>Communication Requirement</i>		3
CM101	English Composition I (3 cr)	or
CM115	Public Speaking (3 cr)	

Required Pharmacy Technology Courses 13 cr

BE122	Medical Office Vocabulary	2
MA107	Medical Mathematics	1
PM104	Pharmacy Technician I	5
PM105	Pharmacy Technician II	5



Focus Areas:
Wind Energy,
Solar Energy,
Blade Repair,
Substation,
Unmanned Aircraft
Systems (Drones)

RENEWABLE ENERGY

Department Chair: Kit Thompson
kthompson@cloud.edu • 785.243.1435, ext.



Recent graduates hired as:

- Wind Farm Technician
- Substation Technician
- Blade Repair Technician
- Wind Farm Manager
- Solar Array Technician
- Drone Pilot

DEGREES & CERTIFICATES

Solar Energy	33-hour certificate	Wind Energy Technology.....	16-hour certificate
Solar Energy	A.A.S. - 64 hours	Substation Technician.....	33-hour certificate
sUAS (Drones)	18-hour certificate	Wind Energy Technology.....	33-hour certificate
sUAS (Drones)	30-hour certificate	Wind Energy Technology.....	A.A.S - 64 hours
sUAS (Drones)	A.A.S. - 62 hours	Associate of General Studies.....	A.G.S. - 62 hours
Blade Repair	16-hour certificate	Associate of Science	A.S. - 62 hours

RENEWABLE ENERGY

Program Learning Outcomes

Wind Energy Technology:

16-hour Certificate

1. Students will explain all general safety guidelines related to the wind energy industry.
2. Students will summarize all aspects of the fundamental operation of a wind turbine and its relationship relative to a wind farm.
3. Students will summarize the extensive aspects of the wind industry; computer technology, personal communications, teamwork, and environmental issues.

33-hour Certificate

1. Students will safely operate, maintain, troubleshoot, and repair mechanical systems.
2. Students will safely operate, maintain, troubleshoot, and repair electrical systems.
3. Students will safely operate, maintain, troubleshoot, and repair hydraulic systems.
4. Students will demonstrate the extensive skill sets of the wind industry; computer technology, personal communications, and teamwork.

Associate of Applied Science

1. Students will explain and comply with all OSHA safety standards related to the wind energy industry.
2. Students will describe electrical transmission from a wind turbine, through a wind farm, and exiting a collection substation.
3. Students will troubleshoot and optimize wind farm performance through the collection and interpretation of data.

sUAS:

18-hour Certificate

1. Students will explain a sectional chart and identify different airspace.
2. Students will match different platforms and sensor payloads with their appropriate missions.
3. Students will identify and describe all of the individual components of the sUAS and explain how they integrate into its system.

30-hour Certificate:

1. Students will use a sectional chart to comply with different airspace restrictions.
2. Students will program and perform an autonomous sUAS mission.
3. Students will describe and implement a scheduled and as needed maintenance strategy for various sUAS platforms.

Associate of Applied Science

1. Students will describe and evaluate the impact of recent legislation dealing with sUAS.
2. Students will evaluate and select the appropriate platform and sensor payload for the required mission.
3. Students will analyze and compare all of the individual components of the sUAS and assess system integration.

Solar Energy:

33-hour Certificate

1. Students will identify the various safety hazards associated with PV systems and components.
2. Students will identify common types of PV system application with and without energy storage.
3. Students will describe the purpose and principles of operation for major PV system components.
4. Students will explain how PV modules are configured in series and parallel to build voltage, current, and power output.
5. Students will identify the requirements for plan review, permitting, inspections, construction contracts and other matters associated with approvals and code-compliance for PV systems.
6. Students will describe project side considerations, including common roof structural design, types of electrical services, point of interconnection, effects of obstructions, shading analysis tools and techniques, and effects of wind exposure.

Associate of Applied Science

1. Students will comply with all safety regulations associated with PV systems and components.
2. Students will analyze and compare different types of PV system application with and without energy storage.
3. Students will troubleshoot PV system components.
4. Students will configure and optimize PV modules in series and parallel to build voltage, current, and power output.
5. Students will demonstrate the required steps for plan review, permitting, inspections, construction contracts and other matters associated with approvals and code-compliance for PV systems.
6. Students will formulate and assess PV solutions to project site considerations, including common roof structural design, types of electrical services, point of interconnection, effects of obstructions, shading analysis tools and techniques, and effects of wind exposure.

RENEWABLE ENERGY

Program Learning Outcomes

Renewable Energy:

Associate of General Studies

1. Students will apply the knowledge and skills from multiple disciplines with renewable energy to be prepared for opportunities in governmental policy, entrepreneurship, or technical professions.
2. Students will identify the various safety hazards associated with PV systems and components.
3. Students will identify common types of PV system application with and without energy storage.
4. Students will describe the purpose and principles of operation for major PV system components.
5. Asset Selection: Students will evaluate and select the appropriate platform and sensor payload for the required mission.
6. Industry Trends and Literacy: Students will describe and evaluate the impact of recent legislation dealing with sUAS.
7. System Literacy: Students will analyze and compare all of the individual components of the sUAS and assess system integration.
8. Students will explain all general safety guidelines related to the wind energy industry.
9. Students will summarize all aspects of the fundamental operation of a wind turbine and its relationship relative to a wind farm.
10. Students will summarize the extensive aspects of the wind industry; computer technology, personal communications, teamwork, and environmental issues.
11. Students will safely operate, maintain, troubleshoot, and repair electrical systems.

Associate of Science

1. Students will apply the knowledge and skills from multiple disciplines with renewable energy to be prepared for further study in an advanced degree.
2. Students will identify the various safety hazards associated with PV systems and components.
3. Students will identify common types of PV system application with and without energy storage.
4. Students will describe the purpose and principles of operation for major PV system components.
5. Students will evaluate and select the appropriate platform and sensor payload for the required mission.
6. Students will describe and evaluate the impact of recent legislation dealing with sUAS.
7. System Literacy: Students will analyze and compare all of the individual components of the sUAS and assess system integration.
8. Students will explain all general safety guidelines related to the wind energy industry.
9. Students will summarize all aspects of the fundamental operation of a wind turbine and its relationship relative to a wind farm.
10. Students will summarize the extensive aspects of the wind industry; computer technology, personal communications, teamwork, and environmental issues.
11. Students will safely operate, maintain, troubleshoot, and repair electrical systems.



RENEWABLE ENERGY

Solar Energy 33-Hour Certificate

General Education Required Courses 6 cr

<i>Communication Requirement</i>	3
CM115 Public Speaking (3 cr) or	
CM240 Interpersonal Communications (3 cr)	
<i>Mathematics Requirement</i>	3
MA104 Technical Math (3 cr) or	
MA110 Intermediate Algebra (3 cr) or	
Mathematics General Education Course	

Required Solar Energy Courses 21 cr

SE100 Introduction to Solar Energy	3
SE101 Solar Energy Fundamentals	3
SE102 Solar Energy Design	3
SE103 Solar Energy Operations & Maintenance	3
WE105 Employability Skills, Safety, & Blueprint Reading	3
WE110 Electrical Theory	3
WE250 Data Acquisition & Communications	3

Elective Courses 6 cr

BE160 Business Accounting	3
BE170 Business Statistics	3
CS108 Computer Applications	3
CS155 Networking and Computer Technology	3
CS140 Introduction to Robotics	3
MG102 Introduction to Entrepreneurship	3
UA100 Introduction to sUAS	3
UA110 sUAS Ground School	3
SC109 Applied Physics	3
WE100 Introduction to Wind Energy	3
WE210 Electronics	3
WE225 Motors, Generators, PLC's	3
WE230 Substation & Voltage Regulation	3
WE270 Transformer Theory	3
WE280 Wind Energy Technology Internship	1-4



RENEWABLE ENERGY

Solar Energy Associate of Applied Science 64 Hours

General Education Required Courses		19 cr	Required Solar Courses		36 cr
<i>Communication Requirement</i>		6	SE100	Introduction to Solar Energy	3
CM101 English Composition I (3 cr) or			SE101	Solar Energy Fundamentals	3
CM120 Survey of Technical Writing (3 cr)			SE102	Solar Energy Design	3
CM115 Public Speaking (3 cr) or			SE103	Solar Energy Operations & Maintenance	3
CM240 Interpersonal Communication (3 cr)			SE201	Advanced Solar Energy Design	3
<i>Humanities Requirement (1 area required)</i>		3	SE202	Advanced Solar Energy Installation	3
Art	Humanities		SE203	Solar Energy System Commissioning	3
Music	Literature		SE204	Solar Energy Advanced Operations & Maintenance	3
Theatre	Philosophy		WE105	Employability Skills, Safety, & Blueprint Reading	3
Foreign Language	History		WE110	Electrical Theory	3
<i>Mathematics Requirement</i>		3	WE210	Electronics	3
MA104 Technical Math (3 cr) or			WE250	Data Acquisition & Communications	3
MA110 Intermediate Algebra (3 cr) or					
Mathematics General Education Course					
<i>Natural Science Requirement</i>		4	Elective Courses		
SC107 Meteorology (4 cr) or			BE160	Business Accounting	3
SC137 Natural Hazards and Disasters (3 cr) and			BE170	Business Statistics	3
SC138 Natural Hazards and Disasters Lab (1 cr) or			CS108	Computer Applications	3
SC146 Environmental Science & Conservation (3 cr) and			CS140	Introduction to Robotics	3
SC147 Environmental Science & Conservation Lab (1 cr)			CS155	Networking and Computer Technology	3
<i>Social/Behavioral Science Requirement</i>		3	MG102	Introduction to Entrepreneurship	3
<i>(1 area required)</i>			SC109	Applied Physics	3
Economics	Anthropology		UA100	Introduction to sUAS	3
Psychology	Political Science		UA110	sUAS Ground School	3
Sociology	Geography		WE100	Introduction to Wind Energy	3
			WE225	Motors, Generators, PLC's	3
			WE230	Substation & Voltage Regulation	3
			WE270	Transformer Theory	3
			WE280	Wind Energy Technology Internship	1-4



RENEWABLE ENERGY

sUAS Remote Pilot(Drones) 18-Hour Certificate

General Education Required Courses 6 cr

Communication Requirement 3
CM101 English Composition I (3 cr) **or**
CM120 Survey of Technical Writing (3 cr)

Mathematics Requirement 3
MA104 Technical Math (3 cr) **or**
MA110 Intermediate Algebra **or**
Mathematics General Education Course

Required sUAS Courses 9 cr

UA110 sUAS Ground School 3
UA140 sUAS Applications 3
UA150 sUAS Personnel, Safety, & Crew Resource Mgmt 3

Elective Courses 3 cr

CS140 Introduction to Robotics 3
CS145 Introduction to CAD 3



RENEWABLE ENERGY

sUAS (Drones) 30-Hour Certificate

General Education Required Courses 6 cr

<i>Communication Requirement</i>	3
CM101 English Composition I (3 cr) or	
CM120 Survey of Technical Writing (3 cr)	
<i>Mathematics Requirement</i>	3
MA104 Technical Math or	
MA110 Intermediate Algebra or	
Mathematics General Education Course	

Required sUAS Courses 18 cr

UA110 sUAS Ground School	3
UA140 sUAS Applications	3
UA150 sUAS Personnel, Safety, & Crew Resource Mgmt	3
UA201 sUAS Command, Control, & Communications	3
UA210 sUAS Systems & Conceptual Design	3
WE240 GIS/GPS	3

Elective Courses 6 cr

AG255 Precision Ag Hardware	3
AG256 Precision Ag Software	3
AR129 Introduction to Digital Photography	3
CS140 Introduction to Robotics	3
CS141 Introduction to Additive Manufacturing (3D Printing)	3
CS145 Introduction to CAD	3
EC101 Introduction to Macroeconomics	3
MG102 Introduction to Entrepreneurship	3
UA100 Introduction to sUAS	3
WE110 Electrical Theory	3
WE250 Data Acquisition & Communications	3
WE280 Wind Energy Technology Internship	4



RENEWABLE ENERGY

sUAS (Drones)

Associate of Applied Science

62 Hours

General Education Required Courses 19 cr

<i>Communication Requirement</i>	6
CM101 English Composition I (3 cr) or	
CM120 Survey of Technical Writing (3 cr)	
CM115 Public Speaking (3 cr) or	
CM240 Interpersonal Communication (3 cr)	
<i>Humanities Requirement (1 area required)</i>	3
Art Humanities	
Music Literature	
Theatre Philosophy	
Foreign Language History	
<i>Mathematics Requirement</i>	3
MA104 Technical Math (3 cr) or	
MA110 Intermediate Algebra (3 cr) or	
Mathematics General Education Course	
<i>Natural Science Requirement</i>	4
SC107 Meteorology (4 cr) recommended	
<i>Social/Behavioral Science Requirement</i>	3
SS101 General Psychology recommended	

Required Courses 27 cr

UA100 Introduction to sUAS	3
UA110 sUAS Ground School	3
UA140 sUAS Applications	3
UA150 sUAS Personnel, Safety, & Crew Resource Mgmt	3
UA201 sUAS Command, Control, & Comm.	3
UA210 sUAS Systems & Conceptual Design	3
WE240 GIS/GPS	3
WE250 Data Acquisition and Communications	3
WE255 Airfoils and Composite Repair	3

Elective Courses 16 cr

AG255 Precision Ag Hardware	3
AG256 Precision Ag Software	3
AR129 Introduction to Digital Photography	3
CS140 Introduction to Robotics	3
CS141 Introduction to Additive Manufacturing (3D Printing)	3
CS145 Introduction to CAD	3
CS155 Networking & Computer Technology	3
EC101 Principles of Macroeconomics	3
MG102 Introduction to Entrepreneurship	3
SC109 Applied Physics	3
WE110 Electrical Theory	3
WE280 Wind Energy Technology Internship	4



RENEWABLE ENERGY

Blade Repair 16-Hour Certificate

General Education Required Courses 3 cr

<i>Communication Requirement</i>	3
CM101 English Composition I (3 cr) or	
CM120 Survey of Technical Writing (3 cr)	

Required Blade Repair Courses 13 cr

WE100 Introduction to Wind Energy	3
WE255 Airfoils and Composite Repair	3
WE257 Applied Airfoils	3
*WE262 Blade Repair Operations	4

*Must have a physical on file prior to enrolling in this class.



RENEWABLE ENERGY

Wind Energy Technology 16-Hour Certificate

General Education Required Courses 3 cr

CM101 English Composition (3 cr) or	3
CM120 Survey of Technical Writing (3 cr) or	
MA104 Technical Math (3 cr) or	
MA110 Intermediate Algebra (3 cr) or	
Mathematics General Education Course	

Required Wind Energy Courses 3 cr

WE100 Introduction to Wind Energy	3
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Elective Courses 10 cr

CS140 Introduction to Robotics	3
CS155 Networking & Computer Technology	3
SE100 Introduction to Solar Energy	3
UA100 Introduction to sUAS	3
UA110 sUAS Ground School	3
WE110 Electrical Theory	3
WE120 Hydraulics	3
WE150 Mechanical Systems	3
WE210 Electronics	3
WE225 Motors, Generators, PLC's	3
WE250 Data Acquisition & Communications	3
WE255 Airfoils and Composite Repair	3
*WE265 Field Training & Project Operations	3
WE280 Wind Energy Technology Internship	1-4

*Must have a physical on file prior to enrolling in this class.



RENEWABLE ENERGY

Substation Technician 33-Hour Certificate

General Education Required Courses 6 cr

Communication Requirement 3
 CM101 English Composition I (3 cr) **or**
 CM120 Survey of Technical Writing (3 cr) **or**
 CM115 Public Speaking (3 cr) **or**
 CM240 Interpersonal Communications (3 cr)

Mathematics Requirement 3
 MA104 Technical Math (3 cr) **or**
 MA110 Intermediate Algebra (3 cr) **or**
 Mathematics General Education Course

Required Substation Courses 24 cr

WE105 Employability Skills, Safety, & Blueprint Reading 3
 WE110 Electrical Theory 3
 WE202 Electrical Power Delivery 3
 WE215 Electrical System Protection & Coordination 3
 WE225 Motors, Generators, PLC's 3
 WE230 Substation & Voltage Regulation 3
 WE250 Data Acquisition & Communications 3
 WE270 Transformer Theory 3

Elective Courses 3 cr

SE100 Introduction to Solar Energy 3
 UA110 sUAS Ground School 3
 WE100 Introduction to Wind Energy 3
 WE210 Electronics 3



RENEWABLE ENERGY

Wind Energy Technology 33-Hour Certificate

General Education Required Courses 6 cr

Communication Requirement 3
 CM101 English Composition I (3 cr) **or**
 CM120 Survey of Technical Writing (3 cr)

Mathematics Requirement 3
 MA104 Technical Math (3 cr) **or**
 MA110 Intermediate Algebra (3 cr) **or**
 Mathematics General Education Course

Required Wind Energy Courses 21 cr

WE100 Introduction to Wind Energy 3
 WE110 Electrical Theory 3
 WE120 Hydraulics 3
 WE150 Mechanical Systems 3
 WE210 Electronics 3
 WE225 Motors, Generators, PLC's 3
 *WE265 Field Training & Project Operations 3

Elective Courses 6 cr

CS140 Introduction to Robotics 3
 CS155 Networking & Computer Technology 3
 SE100 Introduction to Solar Energy 3
 UA100 Introduction to sUAS 3
 UA110 sUAS Ground School 3
 WE230 Substation & Voltage Regulation 3
 WE250 Data Acquisition & Communications 3
 WE255 Airfoils and Composite Repair 3
 WE280 Wind Energy Technology Internship 1-4

*Must have a physical on file prior to enrolling in this course.



RENEWABLE ENERGY

WIND ENERGY TECHNOLOGY (WET)

Associate of Applied Science

64 Hours

General Education Required Courses 19 cr

<i>Communication Requirement</i>	6
CM101 English Composition I (3 cr) or CM120 Survey of Technical Writing (3)	
CM115 Public Speaking (3 cr) or CM240 Interpersonal Communication (3 cr)	
<i>Humanities Requirement (1 area required)</i>	3
Art Humanities	
Music Literature	
Theatre Philosophy	
Foreign Language History	
<i>Mathematics Requirement</i>	3
MA104 Technical Math (3 cr) or MA110 Intermediate Algebra (3 cr) or Mathematics General Education Course	
<i>Natural Science Requirement</i>	4
SC107 Meteorology (4 cr)	
<i>Social/Behavioral Science Requirement</i>	3
SS101 General Psychology (3 cr)	

Required Wind Courses 39 cr

SC109 Applied Physics	3
WE100 Introduction to Wind Energy	3
WE105 Employability Skills, Safety, & Blueprint Reading	3
WE110 Electrical Theory	3
WE120 Hydraulics	3
WE150 Mechanical Systems	3
WE210 Electronics	3
WE225 Motors, Generators, PLC's	3
WE230 Substation & Voltage Regulation	3
WE240 GIS/GPS	3
WE250 Data Acquisition & Communications	3
WE255 Airfoils and Composite Repair	3
*WE265 Field Training & Project Operations	3

Elective Courses 6 cr

CS140 Introduction to Robotics	3
CS155 Networking & Computer Technology	3
SE100 Introduction to Solar Energy	3
UA100 Introduction to sUAS	3
UA110 sUAS Ground School	3
WE260 Wind Turbine Siting	3
WE270 Transformer Theory	3
WE280 Wind Energy Technology Internship	3-4



WET internships are available. Visit with department chair for information.

*Must have a physical on file prior to enrolling in this course.

RENEWABLE ENERGY

Associate of General Studies 62 Hour

Required General Education Courses 25 cr

<i>Communication Requirement</i>	6
CM101 English Composition I (3 cr) or CM120 Survey of Technical Writing (3 cr) CM115 Public Speaking (3 cr) or CM240 Interpersonal Communications (3 cr)	
<i>Mathematics Requirement</i>	3
Mathematics General Education Course or MA110 Intermediate Algebra (3 cr)	
<i>Humanities Requirement</i>	3
Art Humanities Music Literature Theatre Philosophy Foreign Language History	
<i>Social/Behavioral Science Requirement</i>	3
Economics Anthropology Psychology Political Science Sociology Geography	
<i>Humanities or Social Science Requirement</i> (Must be from second area)	3
<i>Natural Science Requirement</i>	4
Physical Science w/lab or Biological Science w/lab	
<i>Open General Education Elective</i>	3

Required Renewable Energy Courses 12 cr

SE100 Introduction to Solar Energy	3
UA100 Introduction to sUAS	3
WE100 Introduction to Wind Energy	3
WE110 Electrical Theory	3

Elective Courses 19 cr

Business	
BE100 Introduction to Business	3
BE152 Salesmanship	3
BE154 Business Law	3
BE155 Marketing	3
BE160 Business Accounting	3
BE170 Business Statistics	3
BE185 Human Resource Management	3
BE188 Principles of Advertising	3
EC101 Principles of Macroeconomics	3
EC102 Principles of Microeconomics	3
MG101 Management Principles	3
MG102 Introduction to Entrepreneurship	3
Political Science and History	
HI122 US History I	3
HI123 US History II	3
SS130 Introduction to Sociology	3
SS140 U.S. Gov't: National	3
SS141 U.S. Gov't: State and Local	3
SS142 Current Political Issues	3

Energy Technology

IE117 OSHA 10-Hour General Industry Training	1
SE101 Solar Energy Fundamentals	3
SE102 Solar Energy Design	3
SE103 Solar Energy Operations & Maintenance	3
SE201 Advanced Solar Energy Design	3
SE202 Advanced Solar Energy Installation	3
SE203 Solar Energy System Commissioning	3
SE204 Solar Energy Advanced O&M	3
UA201 sUAS Command, Control, and Communication	3
UA210 sUAS Systems & Conceptual Design	3
WE105 Employability Skills, Safety, & Blueprint Reading	3
WE120 Hydraulics	3
WE150 Mechanical Systems	3
WE202 Electrical Power Delivery	3
WE210 Electronics	3
WE215 Electrical System Protection and Coordination	3
WE220 Cooperative Ed Internship	3
WE225 Motors, Generators, PLC's	3
WE227 PLC's	3
WE230 Substation & Voltage Regulation	3
WE240 GIS/GPS	3
WE250 Data Acquisition & Communication	3
WE255 Airfoils & Composite Repair	3
WE257 Applied Airfoils	3
*WE262 Blade Repair Operations	3
*WE265 Field Training & Project Operations	3
WE270 Transformer Theory	3
WE280 Wind Energy Technology Internship	1-4

Additional Electives

CS108 Computer Applications	3
CS155 Networking and Computer Technology	3
MA114 Elementary Statistics	3
SC107 Meteorology	4
SC109 Applied Physics	3

Life Skills

BE139 Basic Personal Finance	1
BE210 Leadership Development	3
PE141 Personal Wellness	3
PE250 Stress Management	3
SS106 Marriage and Family	3

Open Electives 6 cr

*Must have a physical on file prior to enrolling in this course.

RENEWABLE ENERGY

Associate of Science

62 Hours

Required General Education Courses 32 cr

Communication Requirement 9

- CM101 English Composition I (3 cr)
- CM102 English Composition II (3 cr)
- CM115 Public Speaking (3 cr) **or**
- CM240 Interpersonal Communications (3 cr)

Humanities Requirement (2 areas required) 6

- Art Humanities
- Music Literature
- Theatre Philosophy
- Foreign Language History

Mathematics Requirement 3

- Mathematics General Education Course

**Natural Science Requirement* 8

- SC103 Physical Science (5 cr) **or**
- SC104 Geology (4 cr)
- SC107 Meteorology (4 cr)

**The biological science requirement is waived.*

Social/Behavioral Science Requirement (2 areas required) 6

- Economics Anthropology
- Psychology Political Science
- Sociology Geography

Required Renewable Energy Courses 12 cr

- SE100 Introduction to Solar Energy 3
- UA100 Introduction to sUAS 3
- WE100 Introduction to Wind Energy 3
- WE110 Electrical Theory 3

Elective Courses 12 cr

Business

- BE100 Introduction to Business 3
- BE152 Salesmanship 3
- BE154 Business Law 3
- BE155 Marketing 3
- BE160 Business Accounting 3
- BE170 Business Statistics 3
- BE185 Human Resource Management 3
- BE188 Principles of Advertising 3
- BE210 Leadership Development 3
- EC101 Principles of Macroeconomics 3
- EC102 Principles of Microeconomics 3
- MG101 Management Principles 3
- MG102 Introduction to Entrepreneurship 3

Political Science and History

- HI122 US History I 3
- HI123 US History II 3
- SS130 Introduction to Sociology 3
- SS140 U.S. Government: National 3
- SS141 U.S. Government: State and Local 3

SS142 Current Political Issues 3

Energy Technology

- WE210 Electronics 3
- WE240 GIS/GPS 3
- WE255 Airfoils & Composite Repair 3

Additional Electives

- CS108 Computer Applications 3
- CS155 Networking & Computer Technology 3
- MA114 Elementary Statistics 3
- SC109 Applied Physics 3

Open Electives 6 cr



Focus Areas:

**Biology, Chemistry,
Earth Science,
Physics, Pre-Medicine,
Pre-Dentistry,
Pre-Pharmacy,
Pre-Physical Therapy,
Pre-Physician Assistant**

SCIENCE

Department Chair: Josh Urban
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Potential Careers:

- Environmental Scientist
- Wildlife/Field Biologist
- Doctor, Dentist, Chiropractor
- Research Scientist
- Conservation Officer
- Science Teacher

Program/General Education Learning Outcomes:

1. Apply the scientific process to evaluate current issues and circumstances.
2. Demonstrate scientific literacy and knowledge about the study.
3. Critically analyze events through a scientific lens.
4. Demonstrate quantitative reasoning and problem-solving.

DEGREES & CERTIFICATES

Associate of Science A.S. - 62 hours

SCIENCE

Associate of Science 62 Hours

Required General Education Courses 34 cr

Communication Requirement 9

CM101 English Composition I (3 cr)

CM102 English Composition II (3 cr)

CM115 Public Speaking (3 cr)

Humanities Requirement (2 areas required) 6

Art Humanities

Music Literature

Theatre Philosophy

Foreign Language History

Mathematics Requirement 3

Mathematics General Education Course

Natural Science Requirement (2 areas required) 10

SC110 Principles of Biology I (5 cr)

SC131 Chemistry I (5 cr)

Social/Behavioral Science Requirement (2 areas required) 6

Economics Anthropology

Psychology Political Science

Sociology Geography

SC137	Natural Hazards and Disasters	3
SC138	Natural Hazards and Disasters Lab	1
SC140	College Physics I	5
SC141	College Physics II	5
SC142	University Physics I	5
SC143	University Physics II	5

Open Electives 10 cr

Elective Courses 18 cr

Biological Science

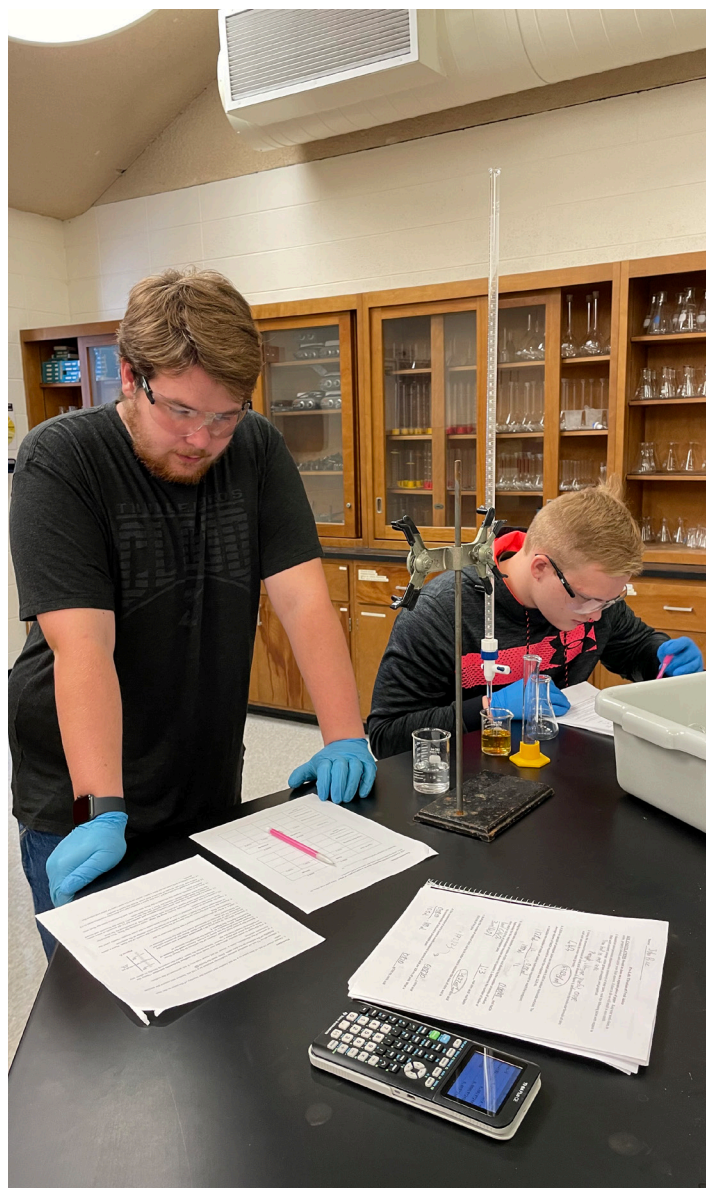
SC103	Physical Science	5
SC111	Microbiology Lecture	3
SC112	Microbiology Lab	2
SC120	Human Anatomy and Physiology I	4
SC121	Human Anatomy and Physiology II	4
SC125	Human Body Dissection	1
SC126	Anatomy and Physiology	5
SC128	Pathophysiology	4
SC151	Principles of Biology II	5

Math

MA112	Trigonometry	3
MA114	Elementary Statistics	3
MA120	Analytical Geometry and Calculus I	5
MA121	Analytical Geometry and Calculus II	5
MA122	Analytical Geometry and Calculus III	5
MA123	Differential Equations	4

Physical Sciences

SC103	Physical Science	3
SC104	Geology	4
SC105	Astronomy	4
SC107	Meteorology	4
SC132	Chemistry II	5



SOCIAL & BEHAVIORAL SCIENCE

Department Chair: Paul Gardner
pgardner@cloud.edu • 785.243.1435, ext. 343

Focus Areas:

Anthropology,
Geography, Sociology,
Psychology, Criminal
Justice, Family Studies,
Counseling/Social Work,
Pre-Law/Political Science



Potential Careers:

- Social Worker
- High School Counselor
- Corrections Officer
- Emergency Preparedness
- Police Officer

Program/General Education Learning Outcomes:

1. Demonstrate critical thinking in understanding of psychological and/or social aspects of the human experience.
2. Describe the influence an individual (or group) can have on another individual (or group).

DEGREES & CERTIFICATES

Associate of Arts..... A.A. - 62 hours

SOCIAL & BEHAVIORAL SCIENCE

Associate of Arts

62 Hours

Minimum General Education Required Courses 31 cr

<i>Communication Requirement</i>	9
CM101 English Composition I (3 cr)	
CM102 English Composition II (3 cr)	
CM115 Public Speaking (3 cr) or	
CM240 Interpersonal Communications (3 cr)	
<i>Humanities Requirement (2 areas required)</i>	6
Art Humanities	
Music Literature	
Theatre Philosophy	
Foreign Language History	
<i>Mathematics Requirement</i>	3
Mathematics General Education Course	
<i>Natural Science Requirement (1 area required)</i>	4-5
Physical Science w/Lab (4-5 cr)	
Biological Science w/Lab (4-5 cr)	
<i>Social/Behavioral Science Requirement</i>	6
Economics Anthropology	
Psychology Political Science	
Sociology Geography	
<i>Open General Education Elective</i>	3

Elective Courses 18 cr

Administration of Justice		
AJ100	Introduction to Criminal Justice	3
AJ112	Special Topics in Criminal Justice	3
AJ118	Introduction to Corrections	3
AJ140	Victimology	3
AJ145	Agency Administration	3
AJ200	Law Enforcement Operations and Procedures	3
AJ211	Criminal Justice Interview & Report Writing	3
AJ212	Crisis Intervention	3
AJ205	Criminology	3
AJ206	Criminal Law	3
AJ207	Criminal Procedures	3
AJ209	Juvenile Delinquency and Justice	3
AJ210	Criminal Investigations	3
AJ220	Cooperative Ed Internship	3
AJ225	Ethics in Criminal Justice	3
Social & Behavioral Science		
EC101	Principles of Macroeconomics	3
EC102	Principles of Microeconomics	3
GE101	World Geography	3
SS101	General Psychology	3
SS102	Abnormal Psychology	3
SS103	Social Psychology	3
SS105	Human Growth and Development	3
SS106	Marriage and Family	3
SS107	Human Sexuality	3
SS113	Human Relations	3
SS125	Introduction to Cultural Anthropology	3

SS127	Child Psychology	3
SS129	Introduction to Social Work	3
SS130	Introduction to Sociology	3
SS131	Cultural Diversity and Ethnicity	3
SS140	U.S. Government: National	3
SS141	U.S. Government: State and Local	3
SS142	Current Political Issues	3
SS150	Introduction to International Relations	3
SS201	Social Problems	3
SS220	Cooperative Ed Internship	3

Additional Electives

BE154	Business Law	3
BE161	Accounting I	3
BE210	Leadership Development	3
FL111	Spanish I	4
HI108	Women in American Society	3
HI120	World History I	3
HI121	World History II	3
HI122	US History I	3
HI123	US History II	3
HI124	Introduction to History	3
MA114	Elementary Statistics	3
JN100	Mass Media in Society	3
JN140	Beyond Web 2.0: Social Media as Identity	3
PE131	First Aid and Safety	3
PE250	Stress Management	3
PH105	Ethics	3

Open Electives 13cr

Course Descriptions

‡ The courses noted with this symbol qualify for guaranteed transfer. Visit www.kansasregents.org/transfer_articulation for more information.

AGRICULTURE

*AG101 CROP SCIENCE.....4

Is a transfer course designed to acquaint students with the botanical principles underlying plant growth, development and reproduction. Three hours lecture and one hour laboratory each week.

AG102 INTRODUCTION TO PLANT PEST CONTROL3

This course emphasizes the importance of pest control. Topics covered include the techniques of preventing damage to agriculture crops due to weeds, insects, diseases or nematodes, pesticide use, weed ecology, insects/entomology, and specific pest problems for individual crops.

AG103 PLANT AND SOILS FOR CROP PRODUCTION.....3

Covers the biological factors governing crop yield and the culture of major crops in the area. Prerequisite: Crop Science and Soils.

*AG104 SOILS4

Covers fundamental principles underlying the formation, fertility and management of soils. Three hours lecture and one extended laboratory per week are required. Prerequisite: Chemistry I or General Chemistry.

AG105 RANGE MANAGEMENT3

An in-depth look at the management of grazing resources including ecology, economics, burning, brush and weed control, grazing systems and complementary grazing crops.

AG106 SOIL CLASSIFICATION AND EVALUATION1

An exercise in classifying and evaluating soils according to criteria recognized by USDA soil scientists. Soils are evaluated for their usefulness for agriculture and engineering purposes.

*AG107 AGRONOMY IDENTIFICATION AND.....1 EXPERIMENTATION

This course is designed to develop in students an ability to quickly and accurately identify plants by seed and vegetative characteristics and analyze seed samples for impurities. Students will prepare for national competition in agronomy.

AG108 ENVIRONMENTAL QUALITY.....3

Is designed to acquaint land managers with the impact of various practices on such environmental parameters as groundwater, fish and wildlife, as well as to introduce methods of improving the environment on a local scale. Means of utilizing under-used natural resources in a profitable and ecologically sound manner will be stressed. Prerequisite: Chemistry I

*AG109 ENVIRONMENTAL QUALITY LAB.....1

Is designed to allow students to experience concepts discussed in Environmental Quality lecture class. One extended laboratory per week, with frequent field trips. Prerequisite: concurrent enrollment in Environmental Quality.

AG111 ANIMAL MANAGEMENT3

Animal Management helps to acquaint agricultural students with production aspects of the livestock industry. It introduces the basic concepts of inheritance, breeding systems, nutrition and physiology of reproduction; concepts of lactation, growth, health, and muscular work; and acquaints students with marketing procedures.

*AG112 AGRONOMY IDENTIFICATION AND.....1 EXPERIMENTATION II

This course is designed to guide students to quickly and accurately identify crops and weed species (both plant and seed) identification, identify pests of crops including insects and diseases, and distinguish common farming implements. All of these aspects are directed toward competition in the year-end national contests.

AG114 DOMESTIC ANIMAL PRODUCTION3

Is designed to acquaint students with the basic concepts and issues of the livestock, dairy, and poultry industries. The class will cover aspects in the areas of genetics, feeding, health, reproduction, and production systems for the major domestic species.

AG115 ANIMAL SCIENCE3

Helps to acquaint agricultural students with the scope of the livestock, dairy, and poultry industries. It introduces the basic concepts of inheritance, breeding systems, nutrition and physiology of reproduction; concepts of lactation, growth, egg laying and muscular work; and acquaints students with marketing procedures, carcass and slaughter grades, principles of carcass grading and aids in the evaluation of live animals.

AG118 PRINCIPLES OF LIVESTOCK SELECTION I.....2

This course will consist of the evaluation and appraisal of market livestock and their carcasses and breeding livestock based on visual appraisal and performance records in an effort to organize and justify comparative decisions by presenting oral reasons. This class is designed to make each student more adept at evaluating differences in animals of the same species.

AG119 PRINCIPLES OF LIVESTOCK SELECTION II1

This course will consist of the advanced evaluation and appraisal of market livestock and their carcasses and breeding livestock based on visual appraisal and performance records in an effort to organize and justify comparative decisions by presenting oral reasons. Prerequisite: Principles of Livestock Selection I.

Course Descriptions

***AG122 INTRODUCTION TO HORSEMANSHIP.....2**
Introduction to Horsemanship helps to acquaint students with basic concepts involved in working with horses. This class will stress safety when working with equines for both the human and the horse. Students will study horse psychology including inherited and learned behavior, methods of communicating, and training. This course includes hands on practice and observation.

AG123 BEEF SCIENCE3
Will cover techniques and management practices used in commercial and purebred cow-calf operations, as well as feeder cattle and feedlot operations. Field trips and hands-on practicums are an integral part of this course.

AG125 HORSE SCIENCE3
Horse Science is a study of the basic principles of animal agriculture specifically related to the equine industry. Prerequisite: Animal Science or consent of instructor.

AG128 ANIMAL HEALTH AND NUTRITION3
A study of the factors that influence animal health and proper nutrition. Typical species (cattle, swine, sheep and horses) in agriculture will be studied. Herd health methods along with up-to-date recommendations in animal nutrition will be provided. Prerequisite: AG115 Animal Science

***AG129 EQUINE GROUNDWORK TRAINING2**
Groundwork Training allows students with all equine interest levels and experience to learn the principles of working the horse's mind from the ground. It also provides handlers with a better understanding of and the importance of feel and timing when communicating during riding. This class will emphasize safety while teaching how to build a trusting and respectful relationship with horses. Lessons will consist of sensitizing the horse to move away from pressure and desensitizing the horse to help it relax while accepting applied pressure.

AG130 PRINCIPLES OF AGRICULTURAL ECONOMICS3
Is suggested for all students interested in the agricultural economy. A study of economic principles with emphasis on their application to the solution of farm, agribusiness and agricultural industry problems in relationship to other sectors of the U.S. economy and foreign countries.

AG132 AGRICULTURE MANAGEMENT3
Relates specifically to management of farms and ranches. Course content will emphasize budget planning, record keeping, record analysis, ag finance/credit, taxes and machinery and land management. Management exercises simulating farm and ranch activities and decisions are incorporated. Microcomputers are used to aid in the completion of these management exercises. Prerequisite: Principles of Microeconomics.

AG134 AGRICULTURAL MARKETING3
Provides an overview of marketing alternatives for agricultural commodities, primarily grains and livestock. Alternatives to be discussed will include cash sales and contracting, hedging, and options. Students will become familiar with marketing plans, basis, and the effect supply and demand has on the markets. Prerequisite: Principles of Macroeconomics or Principles of Microeconomics.

***AG150 INTRODUCTION TO HORTICULTURE4**
This course introduces the basic concepts and practices of horticulture with a survey of different aspects and careers of the horticulture industry. Students will develop professional skills in preparation for a career in the horticultural industry. This course combines three hours lecture and one and one-half hours of laboratory time.

AG159 EQUINE EVALUATION.....1
The study of evaluating form and function in the equine species. Aspects of evaluation will include physical form as in halter classes, as well as the functional aspect of performance classes in both Western and English disciplines. The preparation of oral reasons to organize and justify comparative decisions will be emphasized. The class is designed to make each student more adept at evaluating differences in animals of the same species and is strongly recommended for students wishing to be on the horse judging team.

***AG164 ADVANCED SOIL CLASSIFICATION AND EVALUATION.....1**
An advanced exercise in classifying and evaluating soils, according to criteria recognized by USDA soil scientists including the fundamental chemical, physical, and biological properties of soils; their formation, fertility, and management. Soils are evaluated for their usefulness for agriculture and engineering purposes. Students will use techniques employed in writing descriptions of soil morphology and in classifying soils for intercollegiate soils judging.

AG165 EQUINE EVALUATION II.....1
This course offers the continued study of evaluating form and function in equine species. Aspects of evaluation will include physical form as in halter classes, as well as the functional aspects of performance classes in both Western and English disciplines. The preparation and delivery of oral reasons to organize and justify comparative decisions will be emphasized. This class is required for students on the horse judging team. Prerequisite: Equine Evaluation

AG166 FUNDAMENTALS OF LIVESTOCK NUTRITION.....3
This course teaches the elementary principles of comparative nutrition in farm animals. Additional topics include the anatomy and physiology of the digestive system; the process of nutrition; the origin, chemistry and feeding value of different feeds; the

Course Descriptions

nutritional requirements; and the theory of practical economy for the maintenance and growth of farm animals. Prerequisite: Chemistry I.

***AG188 VARSITY SPORTS: EQUESTRIAN/RODEO**

SKILLS1

Students will learn safe horse equitation and livestock handling and basic techniques of showing horses in English and/or western disciplines to compete at Intercollegiate Horse Association events and/or individual National Intercollegiate Rodeo Association events.

***AG189 VARSITY SPORTS: EQUESTRIAN/RODEO**

SKILLS II.....1

Students practice safe horse equitation and livestock handling and learn advanced techniques of showing horses in English and/or western disciplines to compete at Intercollegiate Horse Association events and/or individual National Intercollegiate Rodeo Association events.

AG210 AGRICULTURE ADVERTISING AND DESIGN.....3

This course exposes students to advertising and marketing principles as they apply to hands-on projects. Students will use industry-adopted software to develop printed communication pieces to the point of being “printer ready”. Assignments will integrate software functionality and design concepts with print production technology requirements.

AG217 FARM COMPUTER APPLICATION I3

Is designed for those with knowledge of Electronic Spreadsheets and Data Management and will involve setting up herd records for livestock operations, developing a ration formulation for actual herd records and developing machinery records and inventory.

AG220 COOPERATIVE EDUCATION INTERNSHIP 1-6

See CA220

***AG225 BASIC EQUITATION3**

This course assists students in advancing basic techniques involved in horseback riding. Safety, proper equipment use, and communication techniques will be emphasized. Students will be expected to increase their skills in performing basic maneuvers on horseback.

***AG226 ADVANCED EQUITATION.....3**

Designed to instruct students in how to achieve a higher level of performance with the equine athlete. The course will stress safety while riding, cues and circumstances, and achieving elevated levels of performance. The students will be expected to safely perform advanced maneuvers on horseback. Prerequisite: Basic Equitation or instructor approval.

***AG228 FOCUSED EQUITATION.....3**

Designed to allow equestrian students who have completed the series of riding classes to focus on a particular discipline such as western pleasure, trail, hunter hack, jumping, reining, etc. This class will stress safety when working with equines, for both the human and horses. Horse psychology, learning, and training concepts will be introduced to the students. Prerequisite: completion of advanced equitation or instructor permission.

****AG255 PRECISION AG HARDWARE3**

Students will gain a basic knowledge of precision agriculture high tech equipment and management strategies.

***AG256 PRECISION AG SOFTWARE3**

This course will cover aspects of Global Positioning Systems (GPS), Geographic Information Systems (GIS), remote sensing, data acquisition, mapping, variable rate application, and the economics of precision agriculture software. Students will develop a fundamental understanding of precision agriculture software and how to effectively use data to create prescriptions.

*** A lab fee will be assessed for these courses.**

ALLIED HEALTH

AH099 MEDICATION AIDE UPDATE1

Will cover basic principles and skills essential for the administration, care and handling of medications which are for oral ingestion and for external application. Current topics such as biological affects of the geriatric patient, over medication, legal aspects, regulations, new drug classifications and reactions will be covered. Not applicable to any degree.

AH163 EMERGENCY MEDICAL TECHNICIAN 10

Is the emergency medical technician initial course of instruction required for persons involved in providing emergency care. It will include care of the patient prior to transport, control of the accident scene, preparation for transport, transport and care of the patient while en route to the hospital, transfer of a patient to a hospital emergency department, communications, reporting, record keeping, and vehicle care. It will provide the participant with the preparation necessary for testing for certification and practice as an Emergency Medical Technician in the State of Kansas. This Emergency Medical Technician course meets the requirements of the Kansas Board of Emergency Medical Services as set forth in the Kansas Administrative Regulations.

AH181 BASIC LIFE SUPPORT.....1

This course is designed to provide healthcare providers with an overview of the cardiovascular and respiratory systems, a discussion of medical and environmental emergencies leading to the need for CPR, and an introduction to diagnose signs and triage, as well as insight into the structure and function of the emergency

Course Descriptions

medical services system. Participants will be trained to : (1)know how to perform CPR in both in-and-out-of-hospital settings; (2) promptly recognize cardiac arrest; (3) give high-quality chest compressions; (4) deliver appropriate ventilations; (5) provide early use of an automated external defibrillator (AED), as part of a team and individually; and, (6) recognize and relieve choking. Adult, child, and infant rescue techniques will be covered. Upon successful completion of all American Heart Association standards, the student will receive affirmation at the Healthcare Provider level.

AH182 ADVANCED CARDIOVASCULAR LIFE SUPPORT ...1

The Advanced Cardiovascular Life Support (ACLS) Provider Course is designed for healthcare providers who either direct or participate in the management of cardiopulmonary arrest or other cardiovascular emergencies with the goal of improving outcomes for adult patients with cardiac arrest and other cardiopulmonary emergencies through provider training. Through didactic instruction and active participation in simulated cases, the students will enhance their skills and clinical decision-making abilities for the diagnosis and treatment of cardiopulmonary arrest, acute arrhythmia, stroke, and acute coronary syndromes. Students are taught to use the following important concepts: Basic Life Support (BLS) Survey, high-quality cardiopulmonary resuscitation (CPR); ACLS Survey; ACLS algorithms; effective resuscitation team dynamics; and immediate post-cardiac arrest care. Prerequisite: AH181 Basic Life Support or BLS Certification.

AH191 ADVANCED EMT 13

This course is designed for individuals interested in providing Advanced Emergency Medical Technician (AEMT) level care in the pre-hospital setting. The program will provide the participant with opportunities to gain information and skills necessary for certification and practice as an AEMT in Kansas, which includes intravenous therapy and medication administration. The National Registry of Emergency Medical Technicians (NREMT) and the Kansas Board of Emergency Medical Services have approved the curriculum for this certification, which addresses information and techniques currently considered the responsibility of the AEMT according to Kansas Education Standards. The program consists of didactic (lecture) instruction and practical skills training. Pre-requisite: current EMT certification; and must be CPR/AED certified by the American Heart Association at the Health Care Provider level.

AH197 CERTIFIED NURSE AIDE5

This course will provide fundamental knowledge of the aging process with emphasis on meeting the requirements of geriatric residents in health care facilities including ethics, communication, normal and aging body system function, nutrition, diseases, observation skills, documentation, and personal care skills. The student will complete a minimum 45 hours of instruction and 45 hours of clinical following the Kansas Department for Aging and Disability Services curriculum. The student will prepare to take the Kansas Certified Nurse Aide State test. Prerequisite: Student must be 16 years or older to enroll in this course.

AH198 MEDICATION AIDE5

This course will enable the student to administer specific medications safely and accurately in an adult care home. The student will complete a minimum 50 hours of instruction and 25 hours of clinical following the Kansas Department for Aging and Disability Services curriculum. The student will prepare to take the Kansas Medication Aide State test. Prerequisite: appropriate reading test score or English Composition I with a grade of C or better. Proof of active Kansas Nurse Aide Certification. Student must be 18 years or older by the end of the class to enroll in this course.

AH199 HOME HEALTH AIDE2

This course will provide fundamental knowledge of the aging process with emphasis on providing services essential to the physical, mental, and psycho-social well-being of clients in the home setting; incorporating basic care of clients with the instrumental Activities of Daily Living in the home setting. The student will complete 30 hours of instruction following the Kansas Department for Aging and Disability Services curriculum. The student will prepare to take the Kansas Certified Home Health Aide State test. Prerequisite: appropriate reading test score or English Composition I with a grade of C or better and proof of active Kansas Nurse Aide Certification.

CRIMINAL JUSTICE

AJ100 ▸ INTRODUCTION TO CRIMINAL JUSTICE3

This course provides an introduction to the historical development and the internal and external issues of the various components of the criminal justice system including police, corrections, and the courts. The student will illustrate how these interrelated components result in the administration of justice today.

AJ112 SPECIAL TOPICS IN CRIMINAL JUSTICE3

An organized course offering the opportunity for intensive examination of specialized topics in criminal justice not normally or not often available as part of regular course offerings. Course involves lectures, readings and classroom discussion of selected topics. Special topics may be repeated for credit when topics vary. Specific topic will be indicated when offered.

AJ114 COMMUNITY POLICING3

This course is an introduction to law enforcement in the United States, focusing on many contradictions and paradoxes that American policing presents. This course will focus on the development of police from the mid-19th century to the present, the varied roles of police, field behavior, organization and management, and contemporary issues facing police departments today.

AJ118 INTRODUCTION TO CORRECTIONS3

Students will evaluate the historical development of the correctional system as well as the role of corrections in our criminal

Course Descriptions

justice system and society. The course analyzes how offenders are supervised in facilities and within the community. The range of sanctions used historically and today are discussed and examined. Issues in corrections such as gender, race relations, ethics, addictions, death penalty, and juveniles, are explored. This course will also examine careers and the future of corrections.

AJ140 VICTIMOLOGY3

Criminal justice professionals, regardless of their specific role, will always come in contact with victims of crime. This course will introduce the crime victim as part of our larger society and as part of the criminal and civil justice system. Students will develop an understanding of the role of victimology as a social science; the psychological impact of crime on the victim; the victim's role in the criminal justice and civil system; the financial impact of the crime on the victim; the victim's rights in the criminal justice system and in society; and the future of criminal justice and social policy as they relate to victims. The course will examine specific areas of victimization such as: sexual assault, domestic violence, child maltreatment, elder abuse and homicide.

AJ145 AGENCY ADMINISTRATION3

This course conducts a practical analysis of modern administration theory and supervisory, management principles and their application to the unique operating problems of criminal justice organizations.

AJ158 LEGAL RESEARCH AND WRITING I3

Introduces the student to the methods of legal research used in the modern law office. Students focus on the use of traditional hard cover and pamphlet resource materials with additional work focusing on the expanding electronic medium including the Internet. Students will also explore the principles of technical writing as well as the particular styles of writing used in the legal profession.

AJ200 LAW ENFORCEMENT OPERATIONS AND PROCEDURES3

This course examines the role of police in society and the application of key concepts to policing scenarios. Students identify, discuss and assess critical police practices and processes to include deployment, arrest procedures, search strategies, and other operational considerations.

AJ205 CRIMINOLOGY3

Is designed to introduce the student to the study of the origin and nature of the development of law and its impact on the behavior of society. It is a study of the conditions which might lead a person to act in ways which are deemed to be "incorrect or deviant behavior" by the society in which they are a part of. It also attempts to define the terms of, and then measure, deviant behavior through the analysis of available research information.

AJ206 ▽ CRIMINAL LAW3

The course examines the history, scope and nature of law. It focuses on the parties to a crime; classification of offenses; criminal

acts and intent; the capacity to commit crime; and criminal defenses. It will cover the elements of misdemeanor and felony crimes.

AJ207 CRIMINAL PROCEDURES.....3

This course introduces basic court system procedures and the jurisdiction of the courts. It also focuses on the constitutional and other legal requirements that affect law enforcement practices and procedures. Specific topics include confessions and interrogations, identification procedures, arrest, search and seizure, and admissibility of evidence.

AJ209 JUVENILE DELINQUENCY AND JUSTICE.....3

This course examines the historical precedents and philosophical reasons for treating juveniles differently from adults. It reviews empirical evidence about child development that can illuminate the reasons for their special status within the system. It will study the major theories that have been proposed as explanations of delinquent behavior. The course will also provide a detailed overview of the juvenile justice system, from its beginnings to the current state of the institution.

***AJ210 CRIMINAL INVESTIGATION.....3**

This course explores issues including the effective interview and interrogation techniques, crime scene management and lab processes, crime scene documentation methods, case preparation and court presentation.

AJ211 CRIMINAL JUSTICE INTERVIEW AND REPORT WRITING3

This course focuses on the unique types of writing required in a criminal justice career. Students are required to gather pertinent information and then record that information by writing a variety of report narratives representative of those prepared by individuals working in a profession within the criminal justice system.

AJ212 CRISIS INTERVENTION3

This course is an overview of crisis intervention for criminal justice personnel focusing on an understanding of the immediate needs of a person in crisis and on crisis intervention techniques in various situations. This course is intended to familiarize the student with the strategies involved in crisis intervention work and the wide range of issues addressed. The strategies of crisis intervention will be discussed in their own right and within the context of such areas as: suicide and personal loss/bereavement as well as other crisis of lethality; post-traumatic stress disorder and the catastrophic events that are related including a focus on children and PTSD, and sexual assault and domestic violence (including both adult and child victims and the perpetrators of these crimes) as well as the current issue of school-based violence and recent information pertaining to disaster events. Perspectives that relate specifically to special populations and crisis work, including persons with substance disorders, and topics related to the impact (hazards and rewards) of crisis intervention on the criminal justice intervener.

Course Descriptions

AJ220 COOPERATIVE EDUCATION INTERNSHIP..... 1-6
See CA220

* A lab fee will be assessed for these courses.

AJ221 COMPUTER AND HIGH TECHNOLOGY CRIMES....3
This course will examine those crimes which involve the use of computers as well as those perpetrated against computers. Topics will include the various state, federal and international laws, investigative measures and techniques, and preventive measures utilized to provide a secure environment for computer hardware and software. The course will also examine developing trends in cybercrime and cyberlaw.

AJ225 ETHICS IN CRIMINAL JUSTICE.....3
This course explores the major components involved in the study of ethics, particularly as it applies to the field of criminal justice. Focus is placed on the code of conduct and ethics of the criminal justice profession and the standards held to in their professional role. The aim of the course is to produce professionals who are not only critical thinkers, but who have the skills necessary to pursue sound ethics in their day-to-day decisions and activities.

AJ251 CRIME SCENE INVESTIGATIONS4
This course is designed to provide students with the basic theoretical and philosophical understanding of the investigatory process. This course will examine techniques and methods of crime scene investigation such as: fundamentals of preliminary investigations, identification, collection of evidence, and fingerprinting. This course will provide students with a general introduction to the mechanics of crime scene investigation and its role in the criminal justice process.

AJ299 CAPSTONE IN CRIMINAL JUSTICE.....3
This course is the culmination of the criminal justice student's academic experience. It serves to synthesize the knowledge gained from each course taken within the criminal justice curriculum and better prepare the graduate to continue on to upper-division studies in the discipline or for entry-level career positions in the criminal justice system. Prerequisite: Introduction to Criminal Justice.

ART

AR100 ▸ ART APPRECIATION.....3
Art Appreciation is a basic level course. The course is a study and appreciation of art and its development through the various periods and movements of man's existence. The course brings the student to a better understanding of art today, its past influences and its current significance.

***AR110 CERAMICS I +3**
Ceramics I is a beginning course covering the various techniques and forms of creating a ceramic piece, both hand built and thrown. It includes exploration of glazing and decorative techniques, but

the emphasis is on bringing one's own personal concepts to the form and craftsmanship. The four and one-half hour per week class is considered both lecture and lab.

***AR111 CERAMICS II +3**
Ceramics II is a continuation of Ceramics I with greater emphasis on student experimentation and development of individual style. The four and one-half hour per week class is considered both lecture and lab.

***AR112 CERAMICS III +3**
Ceramics III is a continuation of Ceramics II with greater emphasis on student experimentation and development of individual style. The four and one-half hour per week class is considered both lecture and lab.

***AR120 ▸ DESIGN I +3**
Design I is a basic level course. This course introduces the basic concepts of design essential to working in the field of graphic design or visual communications. This class is beneficial to students in art, architecture, education, child care and interior design. It is structured around the basic organization of visual communication. The students will have hands on experience dealing with the elements and principles of design and will work with two-dimensional organization on both manual and computer-aided design projects. The four and one-half hour per week class is considered both lecture and lab.

***AR121 GRAPHIC DESIGN I +3**
In Graphic Design I, students will explore the creation and manipulation of visual content using basic design concepts and industry standard computer software. Students will learn to generate hardcopy output using laser and photo quality ink-jet printers. Students will become familiar with the latest practices in the field. Extensive hands-on work with the computer will enable the student to extend their design skills and computer software expertise. The four and one-half hour per week class is considered both lecture and lab. Prerequisite: Graphic Software Applications and Design I or with instructor permission.

***AR122 GRAPHIC DESIGN II +3**
Graphic Design II allows the student visual designer and artist to work with computer hardware and software fundamental for the visual designer and artist. It provides the basic knowledge necessary to operate Macintosh computers and to use software applications in design projects related to product and promotional purposes. This course integrates the graphic design process with the computer's capabilities. The student learns to take a sketch idea and develop it through digital thumbnails, laser proofs, and color output comprehensives as well as the creation and implementation of multimedia and web content. The four and one-half hour per week class is considered both lecture and lab. Prerequisite: Graphic Software Applications, Design I or Two-Dimensional Design, and Graphic Design I, or with instructor approval.

Course Descriptions

***AR129 INTRODUCTION TO DIGITAL PHOTOGRAPHY +3**
 Introduction to Digital Photography is a course of study to develop an understanding of basic photographic techniques and computer assisted image manipulation. This course will include, but not limited to, the following topics; basic camera functions, basic digital image processing, visualization and design skills, and digital manipulation techniques needed in today's market place. Students will have opportunities to create portfolio pieces. The four and one-half hour class is considered both lecture and lab.

***AR130 ▸ DRAWING I +3**
 Drawing I is an introductory drawing course for the student with limited art background. Students work on techniques of perception and graphic composition, using a variety of art materials. This is a hands-on class and begins with basic skills in perception and development of technique with various subject matter and drawing medias. The four and one-half hour class is considered both lecture and lab.

***AR131 DRAWING II +3**
 Drawing II is a continuation of the Drawing I course. Students will continue to work on techniques of perception and graphic composition, as well as working with a variety of art materials. This is a hands-on class that will help the students enhance their personal vision and style by increasing their knowledge of perception and technique development with various subject matter and drawing medias. The four and one-half hour class is considered both lecture and lab.

***AR140 PAINTING I +3**
 Painting I is an introductory painting course with a concentration on painting techniques and color mixing. Emphasis is placed on individual creativity and experimentation. This is a hands-on class and covers the fundamentals of painting, from color theory, techniques of color application, color modeling and surface separation and definition. The four and one-half hour class is considered both lecture and lab.

***AR141 PAINTING II +3**
 Painting II is a continuation of Painting I focusing on individual experimentation in traditional, contemporary, and experimental techniques. The four and one-half hour class is considered both lecture and lab.

***AR145 WATERCOLOR +3**
 Watercolor is a hands-on class dealing with water-based paint media. The student will explore the many uses and applications of this media. The associations of color in illustration will be applied through various media techniques to master balance through contrast, property of light, shadows, simultaneous contrast and tints. The applications will be achieved through the use of color theory, color themes and the various painting techniques associated with

watercolor. The four and one-half hour per week class is considered both lecture and lab.

AR220 COOPERATIVE EDUCATION INTERNSHIP..... 1-6
 See CA220

*** A lab fee will be assessed for these courses.**

+ These courses are considered lab courses.

BUSINESS

BE100 ▸ INTRODUCTION TO BUSINESS.....3
 This course is an introduction to a broad range of terminology and topics useful to business management. Terminology necessary to understand business literature is emphasized. The course will provide an overall picture of business operations, as we cover different types of economic systems, global trade, business entrepreneurship, e-business, managerial decision-making, techniques for increasing employee motivation, packing, pricing & distributing products, the relationship between management and unions, business ethics, and much more. This course is designed to develop student responsibility for learning, thinking, and questioning while using business as the model.

BE115 BUSINESS MATHEMATICS.....3
 Is a course starting with the basic math concepts and moving to more complex mathematical concepts. The course will not only deal with theory but will concentrate on applications of using those concepts in solving problems dealing with personal finance, business finance, and business analysis.

BE121 BUSINESS COMMUNICATIONS.....3
 Provides instruction on the role of communication in the business environment and identifies the most effective methods for creating, sending, and receiving messages. In addition, students should be able to utilize effective oral and written communication skills in business; write and evaluate business documents, including letters, memos, and reports using the principles of correct style, organization and format; and prepare an effective oral business presentation.

BE122 ▸ MEDICAL OFFICE VOCABULARY2
 This course presents a study of basic medical terminology. Prefixes, suffixes, word roots, combining forms, special endings, plural forms, abbreviations, and symbols are included in the content. A programmed learning, word building systems approach is used to learn word parts for constructing or analyzing new terms. Emphasis is placed on spelling, definition, usage, and pronunciation.

Course Descriptions

BE124 LEGAL OFFICE VOCABULARY2

Is designed to give students a working vocabulary of legal terms necessary for office success. The material is divided into modules, with content introduced at a basic level, progressing, by specialization, to more difficult matters.

BE139 BASIC PERSONAL FINANCE.....1

This course focuses on the basic skills in personal financial management with an emphasis on basic money management including budgeting, personal financial statements, consumer credit, consumer debt, tax strategies, and investing fundamentals.

BE152 SALESMANSHIP3

The student will be provided examples of selling in a global environment, information about the technology available to every salesperson, and most importantly, the ABC's (the fundamentals) of relationship selling. The course is a vehicle by which the student is given ample materials to construct his/her own sales presentation. Covering the basic foundations for understanding the concepts and practices of selling in a practical, straight-forward, and effective manner, the course provides the student a guide to use in preparing sales presentations and role-playing exercises.

BE153 ▸ PERSONAL FINANCE.....3

A personal financial management course that emphasizes time value of money, budgeting, borrowing, taxes, insurance, consumer credit, risk management, investments, retirement, and estate planning. Practical knowledge and application of these areas are stressed.

BE154 ▸ BUSINESS LAW.....3

Few subjects are as dramatic and challenging as the law. Because laws grow from human conflict, lawsuits are often emotional, complex, and costly. Despite these costs, more and more business and personal disputes are being settled in court every day. Ours is a "litigious society." Knowing more about the law can help students avoid legal conflicts in their professional and personal lives. If they cannot resolve a dispute, a background in the law will help them preserve their rights.

BE155 ▸ MARKETING3

Is essential to the operation of any business firm or public service organization. The successful enterprise in today's changing and competitive world is increasingly characterized by its understanding of the many facets of marketing and by its ability to deliver goods and services to the market more efficiently than its competitors. This course is designed to introduce students to the basic concepts, practices, and techniques of marketing.

BE160 BUSINESS ACCOUNTING.....3

Students receive instruction in the fundamentals of accounting from recording business transactions including financial statement preparation. Emphasis is on the fundamentals of double entry accounting and the basic accounting cycle for service and merchandising enterprises.

BE161 ▸ ACCOUNTING I.....3

An introduction to the financial accounting fundamentals. This course focuses on analyzing transactions, the use of various journals and ledgers, measuring the value of assets and liabilities, calculation of the different methods of depreciation, preparation of financial statement as per U.S. GAAP along with an introduction of IFRS for service and merchandising enterprises.

BE162 ▸ ACCOUNTING II.....3

A continuation of BE161 Accounting I with greater emphasis placed on the interpretation and use of accounting data. The course focuses on accounts, records, and financial statements specific to partnerships, corporations, and manufacturing companies. Fair Value is used where applicable. Managerial Accounting is introduced in this course. Prerequisite: Accounting I with grade of C or higher.

BE165 COMPUTERIZED ACCOUNTING.....3

Provides a hands-on approach to learning how computerized integrated accounting systems function. Provided is an overview for using the software QuickBooks Pro and developing the process for recording transactions involving sales, receivables, purchases, payables, general accounting, end-of-period procedures, payroll, and computerization of a manual accounting system. Prerequisite: High School Accounting, Business Accounting, or higher.

BE166 PAYROLL ACCOUNTING.....3

An in-depth look at the many aspects of preparing, distributing, and recording payroll. Included in this course are issues regarding reporting, deductions, Federal forms, deposits, regulations, and government laws related to payroll. Prerequisite: High School Accounting, Business Accounting or higher (may be enrolled currently).

BE170 BUSINESS STATISTICS3

Is an introduction to descriptive and inferential statistics. Included are the uses of measures of central tendency and dispersion, probability, estimation and hypothesis testing, analysis of variance, and correlation. Recommended Prerequisite: High school algebra, Intermediate Algebra, or Survey of Math with a C or better or appropriate Accuplacer/ACT score.

BE185 HUMAN RESOURCE MANAGEMENT.....3

This course examines the role of the human resource professional as a strategic partner in managing today's organizations. Key functions such as recruitment, selection, development, appraisal, retention, compensation, and labor relations are examined. Implications of legal and global environments are appraised and current issues such as diversity training, sexual harassment policies, and rising benefit costs are analyzed.

BE188 PRINCIPLES OF ADVERTISING3

Students will learn the fundamental role of advertising in the communication process, how it works as an element of the marketing

Course Descriptions

process, basic terminology, the functions and effects of advertising in business, the influence of economics on the evolution of advertising, and advertising's overall impact on the society in which it operates. Emphasis is placed on analyzing current examples of advertising along with real-world experiences in the advertising industry.

BE210 **LEADERSHIP DEVELOPMENT.....3**

Is designed to prepare students to assume increasingly responsible leadership roles in their personal, professional and academic lives. The course focuses not only on significant theories of leadership and their applicability to leaders of the past and present, but also includes substantial hands-on experiential learning opportunities which puts leadership into action.

BE220 COOPERATIVE EDUCATION INTERNSHIP 1-6
See CA220

CAREER CENTER

CA192 DYNAMICS OF CAREER PLANNING 1-2

Is designed to help people explore their interests, abilities, strengths, weaknesses, likes and dislikes and relate them to the world of work. The class participants will learn techniques for exploring the world of work on the Internet and develop an academic plan which reflects their career decision.

CA220 COOPERATIVE EDUCATION INTERNSHIP 1-6

Experiential learning in a work setting related to college major and career plans. Hands on work and observation is utilized to gain understanding of the job duties, environment, and related activities.

CA221 JOB SEARCH1

Is to make the student aware of the skills needed for entry into the competitive world of work. It will provide valuable insight into one's strengths and weaknesses while providing practice in preparing resume's, cover letters and standard application forms. In addition, the student will learn techniques for presenting himself/herself in a confident, professional manner at the employment interview and how to appropriately respond to a wide range of possible questions at that interview.

COMMERCIAL DRIVERS LICENSE

***TD250 CDL CLASS A TRUCK DRIVING TRAINING I.....8**

This is the first course of a concurrent two-course program where students will gain the knowledge and practical experience necessary to be a driver of a commercial tractor-trailer unit and begin work with an over-the-road trucking firm. Students

will take written and driving tests at the Kansas Department of Motor Vehicles and obtain their Class A Commercial Driver's License. Additional emphasis will be placed on driver's daily log and mileage records, defensive driving, vehicle inspections, and contemporary industry trends. Prerequisite: Students must be a 18 years old for intrastate (within the state) driving. To qualify for operation in interstate commerce, a driver must be at least 21 years old and must meet federal and state physical and health requirements. In addition, students must not be using narcotics or other habit forming drugs.

***TD251 CDL CLASS A TRUCK DRIVING TRAINING II7**

This is the second course of a concurrent two-course program where students will gain knowledge and practical experience necessary to be a driver of a commercial tractor-trailer unit and begin work with an over-the-road trucking firm. Students will practice driving a manual-shift combination tractor-trailer unit in rural, city, and interstate settings during daylight and dark, and in as many weather conditions as the season allows. Additional emphasis will be placed on safety, work ethic, driver health and wellness, and federal motor carrier regulations, including Motor Carrier Safety Improvement Act and Department of Transportation regulations. Prerequisite: Students must be a 18 years old for intrastate (within the state) driving. To qualify for operation in interstate commerce, a driver must be at least 21 years old and must meet federal and state physical and health requirements. In addition, students must not be using narcotics or other habit forming drugs.

***TD252 DEFENSIVE DRIVING FOR THE PROFESSIONAL TRUCK DRIVER.....1**

During this course, students will complete The National Safety Council's Defensive Driving Course for the Professional Truck Driver and will receive a certificate of completion to provide to employers and insurers. Students will also be instructed by an industry representative on the topic of railroad safety according to the Operation Lifesaver curriculum. Students will draw upon their driving experiences during the certificate program. Students will plan a coast-to-coast trip, utilizing the skills they have learned in the areas of defensive driving, map reading, route selection, hours of service, and log book recordkeeping. Prerequisite: Students must be a 18 years old for intrastate (within the state) driving. To qualify for operation in interstate commerce, a driver must be at least 21 years old and must meet federal and state physical and health requirements. In addition, students must not be using narcotics or other habit forming drugs. Must be currently enrolled in or previously passed TD251.

* A lab fee will be assessed for these courses.

COMMUNICATIONS

(Courses numbered 099 and below will not apply toward graduation.)

Course Descriptions

CM067 TRANSITIONAL ENGLISH WORKSHOP.....1

An applied course for the development of reading, writing, listening, and speaking skills for students with low proficiency in English. The student will use online textbook support material and instructor-guided activities to develop functional and academic skills necessary to engage in college-level courses in English.

Corequisite: Because Transitional English Workshop focuses on building basic reading and writing skills, it is paired with a Transitional English (CM 098) course at the time of enrollment. Students withdrawing from Transitional English will need instructor's permission to remain in Transitional English Workshop.

Prerequisite: Appropriate ACT Compass writing score, TOEFL score (or equivalent), or an appropriate writing score on the college-administered Accuplacer test.

CM071 ENGLISH AS SECOND LANGUAGE I.....3

Through a variety of learning activities focused on improving reading and writing skills, students will improve their vocabulary and use of English structure. Prerequisite: appropriate Accuplacer composite ESL Reading, ESL Listening, and ESL Grammar Usage scores.

CM072 ENGLISH AS SECOND LANGUAGE II.....3

The second part of a two-semester developmental sequence in ESL instruction, this course provides a variety of learning activities to improve reading and vocabulary skills through writing activities.

Prerequisite: appropriate Accuplacer composite ESL Reading, ESL Listening, and ESL Grammar Usage scores.

CM079 PEER TUTOR TRAINING1

This course prepares students to be peer tutors. The students will learn how to adjust to different learning styles, incorporate brain-based learning, and apply study strategies to specific courses.

CM087 READING COMPREHENSION..... 1-3

Complex materials are no longer a mystery as critical thinking about main ideas and details, summarization, and identification of patterns of organization are used to comprehend text. Reading and writing are blended to build strong academic skills.

***CM094 COMPOSITION WORKSHOP.....3**

Composition Workshop is a developmental course designed for the student who needs individualized instruction in the clear and correct usage of English grammar, extended practice with writing form and purpose, and additional support in the development of successful writing habits. Co-requisite: Because Composition Workshop focuses on building writing skills, Composition Workshop should be paired with an English Composition I (CM 101) course at the time of enrollment. Students withdrawing from English Composition I (CM 101) will need instructor's permission to remain in Composition Workshop. Prerequisite: Appropriate ACT Accuplacer writing score, an appropriate writing score on the college-administered writing sample, or a C or better in Transitional English.

CM098 TRANSITIONAL ENGLISH3

Transitional English helps students develop their reading and writing skills in preparation for English Comp I and English Comp II courses. This class includes various writing assignments, grammar review, and critical reading. The class structure consists of lecture, discussions, class workshops, individual conferences, small group work, and in-class writing. Students may also be required to work assignments in the Student Success Center.

CM101 ▸ ENGLISH COMPOSITION I.....3

English Composition I provides instruction in writing with emphasis on grammatical correctness, acceptable usage, effective organization, and expression of ideas. Assigned reading, research and expository writing are required. Prerequisites: Appropriate ACT/Accuplacer score or Transitional English (CM098) with a C or better and enrollment in co-requisite, Composition Workshop (CM094). Co-requisite: Composition Workshop (CM094) determined by appropriate ACT/Accuplacer score.

CM102 ▸ ENGLISH COMPOSITION II3

English Composition II is a continuation of English Composition I with a focus on critical reading, writing, and research. Emphasis is placed on finding, evaluating, and ethically utilizing research to strengthen critical thinking skills and create substantive writing. Prerequisite: English Composition I.

CM106 ▸ CREATIVE WRITING I.....3

Creative Writing I is designed to present opportunities for the writing and rewriting of short story, poetry, drama, and other genres. It is a time for students to immerse themselves in the discipline of writing and become more conscious as writers - trying other genres, setting writing schedules, trying out advice for revision, discovering what makes them tick as a writer. Recommended preparatory course: English Composition I.

CM107 CREATIVE WRITING II.....3

Creative Writing II is designed to stimulate creativity and encourage students to seek answers and interpretations beyond the obvious - to develop insight and creative vision. It goes beyond the requirements of Creative Writing I, however, in that students work on one lengthy work or a series of connected short works, and consult with the instructor in and outside class in addition to the regular work of the class. Prerequisite: Creative Writing I.

CM115 ▸ PUBLIC SPEAKING3

Public Speaking is an elementary course in the study and practice of the basic principles of speech and interpersonal communication with emphasis on critical thinking, the creative and intelligent selection of material, organization and oral presentation. Students taking this class in an online format will be required to record and submit speeches electronically. All speeches must be recorded in front of a live audience which the students must arrange. Minimum audience numbers vary by speech.

Course Descriptions

CM120 SURVEY OF TECHNICAL WRITING.....3

Survey of Technical Writing is an introduction to the process of technical and business writing. Topics include conducting audience and needs analysis; organizing and writing clear, precise, grammatically correct workplace prose; and producing a variety of routine professional reports and correspondence. Focused projects will include applied business/industry or technical degree exercises. Prerequisite: Appropriate ACT/Accuplacer score or Transitional English.

CM121 ▸ INTRODUCTION TO LITERATURE.....3

Introduction to Literature is a survey of literature from Britain, the United States and other countries emphasizing major poets, fiction writers and playwrights plus general literary analysis, including the literary devices used in these genres. Prerequisite: English Composition I. Recommended preparatory course: English Composition II.

CM122 ▸ AMERICAN LITERATURE I.....3

American Literature I is a historical survey of the literature of early Americans, emphasizing major authors, literary trends, historical events and significant ideas from early Native American works through the Transcendental Movement of the 1850's. Prerequisite: English Composition I. Recommended preparatory course: English Composition II.

CM123 ▸ AMERICAN LITERATURE II3

American Literature II is a study of American literature from the Civil War period through the trends of realism, naturalism, and on into the ideas and literary trends of modern and contemporary America. Prerequisite: English Composition I. Recommended Preparatory Courses: English Composition II.

CM124 WORLD LITERATURE AND THE HUMAN EXPERIENCE3

The course emphasizes the study of the literary, cultural, and human significance of select works of world literature. The class promotes an understanding of the works in their cultural/historical contexts and the enduring human values which unite the different literary traditions. Prerequisite: English Composition I. Recommended preparatory courses: English Composition II.

CM125 ▸ LITERATURE FOR CHILDREN3

Literature for Children is a survey of literature for children particularly in the elementary grades. It gives an opportunity to read and evaluate many books, stories and poems. Also promoted are resources and practical applications for reading aloud in the classroom, as well as igniting a love for reading in the mind of the individual child. For teachers in elementary education. Prerequisite: English Composition I. Recommended preparatory course: English Composition II.

CM127 THE SHORT STORY.....3

The Short Story is a survey of short stories from both American and selected world authors. Selected short stories from different eras are studied. Assigned readings, various themes, and literary analysis are included. Prerequisite: English Composition I. Recommended preparatory course: English Composition II

CM139 SPORTS BROADCASTING3

Sports Broadcasting provides students a more in-depth look at the mechanics and preparation aspects involved in the coverage of a sporting event. Students will operate the equipment, prepare the information, and do the actual "on-air" broadcasts of sporting events. Emphasis will also be placed on sports reports, coach and athlete interviews, broadcast equipment terminology, and play-by-play announcing.

CM140 ▸ THEATRE APPRECIATION3

Theatre Appreciation challenges students to interpret, criticize, and appreciate roles theatre plays in society through positive comparisons to our modern "theatre of availability" - television and film.

CM141 ▸ INTRODUCTION TO ACTING3

Introduction to Acting offers majors and non-majors the fundamentals of acting in daily life and as a profession. Students should be able to connect acting experiences found in the lives of ordinary people with those crafted for theatrical characterization. Students explore the process of acting from critical thinking and analysis to public presentation.

CM142 ACTING I.....3

Acting II examines the evolution of actor training towards a holistic, sustainable, and healthy acting practice. This class explores major approaches to the actor's process of analysis and style. Students will investigate classical and contemporary training modalities, and the role played by voice and movement.

CM143 ▸ PLAY PRODUCTION3

Play Production is a lecture-lab course with emphasis on acting in dramatic productions under performance conditions. Lectures and practice in the processes of interpretation and techniques of theatrical expression. Course culminates in a performance for public viewing.

CM146 ▸ PLAY PRODUCTION II.....3

Play Production II, a continuation of Play Production, is a lecture-lab with emphasis on direct experience in play production, either as a performer, an assistant director, stage manager, or in technical support capacity.

CM148 AMERICAN CINEMA APPRECIATION.....3

American Cinema Appreciation is a survey of the American film industry as an art form, as a business, and as a system of representation and communication. The course further explores how Hollywood films work technically, aesthetically, and culturally to reinforce and challenge America's national self image.

Course Descriptions

CM157 MASS MEDIA PRODUCTION I.....3
 This course is a hands-on, in-depth study of how media conventions and content interact. In this applied production course, students will use the principles of convergent media to report school, community, and national news, sports, and lifestyle stories to T-Bird News as well as other real-world industry outlets. Students will work hands-on, discovering, developing, composing, editing, and publishing a story. Students will be required to produce and publish each story using a variety of media including print, radio, video, and web.

CM158 MASS MEDIA PRODUCTION II3
 This course emphasizes a multi-disciplinary and multimedia approach to business-client relationships. Students will prepare a strategic communication campaign on behalf of a local client. It will include the production of material in a variety of mediums including print, radio, video, and web for use by the client. These materials, in turn, may be used by the students as they develop their professional portfolios. This class is rooted in critical thinking, research, multimedia production, and problem solving as well as professionalism and strong communication skills.

CM220 COOPERATIVE EDUCATION INTERNSHIP 1-6
 See CA220.

CM240 ▸ INTERPERSONAL COMMUNICATIONS3
 This course is a study of dyadic communication within interpersonal relationships between friends, family, fellow students, romantic partners, supervisors, and colleagues in the workplace. Emphasis is placed on the role of healthy and meaningful communication in establishing, building, maintaining, and sometimes refashioning personal and/or professional interpersonal relationships. Course content stresses how to become a more effective and competent communicator by exploring personal communication goals, analyzing communication barriers, identifying relational breakdowns in communication, and addressing conflict scenarios in order to deepen a student's understanding of the communication process and improve communication skills.

* A lab fee will be assessed for these courses.

COMPUTER SCIENCE

CS102 PERSONAL COMPUTING3
 Designed for individuals to become familiar with microcomputers and their operations. An introduction to the Windows environment will be discussed. Microsoft software will be used to apply this knowledge in the use of word processing, data-base, electronic spreadsheet, and data communications technology for both home and business use.

CS104 INTRODUCTION TO WEB SITE DESIGN3
 Intended as an introductory course on creating Web pages. The

objectives of this course are: to teach the fundamentals of developing Web pages using HTML; to acquaint students with the XHTML guidelines; to show students how to create Web pages suitable for course work, professional purposes, and personal use; to expose students to common Web page formats and functions; and to promote curiosity and independent exploration of World Wide Web resources. Prerequisite: Knowledge of computer software and Windows operating systems.

CS107 GRAPHIC SOFTWARE APPLICATIONS.....3
 Introduction to, and studio practice in, the area of visual communication. Emphasis is placed on mastery of software applications used in the communication graphics industry. Emphasis will be given to concepts relating to the organization of how software applications can support design concepts, color usage, image and concept development, and creative problem solving.

CS108 ▸ COMPUTER APPLICATIONS.....3
 An introductory computer course designed for individuals to become familiar with computers and their operations. An integrated software program will be used to apply this knowledge in word processing, database, and electronic spreadsheet technology for both home and business use.

CS140 INTRODUCTION TO ROBOTICS.....3
 Introduction to Robotics students will be introduced to many facets of robotics and microcontrollers. This course will cover basic principles of open source software use and development. Class topics will cover components of a micro controlled circuit, terminology used within both the software and development of micro controller prototyping boards and programs.

CS141 INTRODUCTION TO ADDITIVE MANUFACTURING (3D PRINTING)3
 Introduction to Additive Manufacturing, or 3D Printing as it is more commonly called, is a revolution in the modern era. This course will cover the basics of the history of 3D Printing, how Open Source communities have advanced the technology, and how to use the hardware and software to produce many prototype devices or products. The course will also explore the limitations of 3D Printing and what the future holds for the discovery of new 3D printing applications.

CS145 INTRODUCTION TO CAD.....3
 Students in this Autodesk Fusion 360 course will be introduced to many facets of Computer Aided Design (CAD), Computer Aided Manufacturing (CAM), Computer Aided Engineering (CAE), and 3D Printing. This course will cover the fundamentals of how to use these design tools to connect your entire product development process into one cloud-based platform.

CS155 NETWORKING AND COMPUTER TECHNOLOGY...3
 Introduces the student to the networking field. Focuses on network terminology and protocols, local-area networks (LANs), wide-area networks(WANs), Open System Interconnection (OSI)

Course Descriptions

model, cabling, cabling tools, switches, routers, Ethernet, Internet Protocol (IP) addressing, and network standards. The course will reinforce lecture and study from the text with laboratory activities through a simulated networking program called LabSim™ Online for Network+.

CS220 COOPERATIVE EDUCATION INTERNSHIP 1-6
See CA220.

ECONOMICS

EC101 ▸ PRINCIPLES OF MACROECONOMICS3
Presents a macroeconomic approach in the introduction of the concepts of scarcity, national income and monetary analysis, the economic role of government, brief history, and economic growth.

EC102 ▸ PRINCIPLES OF MICROECONOMICS3
Is concerned with microeconomic approach to the economics of the business firms and the market structures for the product and resource market allocation. Supply and demand will be studied in some detail, plus cost-benefit analysis and some domestic and international problems.

EC220 COOPERATIVE EDUCATION INTERNSHIP 1-6
See CA220.

EDUCATION

ED100 ▸ INTRODUCTION TO EDUCATION.....3
An introductory course for students considering a career in professional education. The course includes historical, philosophical, sociological and learning developments within the education profession, professional needs and demands and requirements of professional education programs.

ED101 INTRODUCTION TO EDUCATION PRACTICUM 1-2
The practicum is designed to provide aspiring education majors an opportunity to observe and interact with teachers and students in an elementary and secondary setting. Opportunities to evaluate the total spectrum of education will be offered through direct observation. Prerequisite: proof of liability insurance. The student must be dual enrolled in ED100 Introduction to Education.

ED114 ▸ ART IN THE ELEMENTARY CLASSROOM3
Art methods, materials and philosophy of children's art at different grade levels. This is considered a lab class.

ED118 DIVERSE LEARNERS3
There are many ways that students differ from each other in academic situations. Understanding the implication of differences in abilities, disabilities, cultural backgrounds, religious backgrounds,

psychological disorders, and first languages on learning can enhance the effectiveness of teachers in their classrooms.

ED119 TEACHER CADET CLASS.....3
The course is an introduction to the field of teaching. The course includes observation opportunities in local classrooms and didactic experiences in their various high schools. The intent of the class is to help students to decide if teaching is a career that they would want to pursue in the future.

ED123 ▸ MUSIC IN THE ELEMENTARY CLASSROOM.....3
A methods class that is designed to encourage thinking about teaching. Another primary purpose of the class is to encourage an understanding of how to help students express themselves through music. The class will prepare the student with a foundation in competencies to prepare materials, establish teaching objectives, and teach the use of music within the elementary classroom. The class will provide the student with skills in using recorders, guitars, keyboards, and rhythm instruments for musical activities. Time will also be spent with rhythmic movement, and doing creative musical activities.

ED124 ELEMENTARY SCHOOL PHYSICAL EDUCATION ..3
A methods class that is designed to instruct students in the essential components for teaching physical education to elementary students. Included in the class will be teaching styles, the development of children's physical, cognitive, and social skills, and organization of movement activities.

ED220 COOPERATIVE EDUCATION INTERNSHIP 1-6
See CA220.

FOREIGN LANGUAGE

FL111 ▸ SPANISH I.....4
A course designed as an overview of the initial grammar, vocabulary, and special features of the Spanish language. The focus of the course is upon the enhancement of reading, writing and oral communication skills.

FL112 ▸ SPANISH II4
A course designed to complete the initial grammar, vocabulary, and Spanish language began in Spanish I. The focus of the course is upon the enhancement of reading, writing, and oral communication skills. Prerequisite: Spanish I.

GEOGRAPHY

GE101 ▸ WORLD GEOGRAPHY.....3
World Geography is designed to survey the geographic and cultural features of the world's major regions. A central theme concerns the role played by technological change in shaping both

Course Descriptions

the lifestyles and landscapes found in each of the regions studied. The resulting contrasts between the Technological World and the Developing World are examined in detail.

HISTORY

HI108 **WOMEN IN AMERICAN SOCIETY**3
Will explore the many facets of women in American society and the impact on relationships and family, both from historical and contemporary perspectives. Students will be offered a cross section of available information from a liberal arts perspective, including literature, psychology, history, political science, and social philosophy.

HI120 **WORLD HISTORY I**3
World History I is an introductory survey of major developments in the history of the world from the origins of civilizations to the 15th century. The focus is on a comparison of key trends and conditions in different parts of the world throughout these centuries.

HI121 **WORLD HISTORY II**3
World History II is an introductory survey of major developments in the history of the world from the 15th century to the 21st century. Students will examine changes and continuities, patterns in and among various societies as they come into contact, influence each other, and, in places, become interdependent.

HI122 **U.S. HISTORY I**3
A survey of American History from its European background through the time of the Civil War and Reconstruction. The political, economic and social growth of our country is emphasized.

HI123 **U.S. HISTORY II**3
A survey of American History from Reconstruction to the present. The intellectual, political, economic, and social growth of our country is emphasized.

HI124 **INTRODUCTION TO HISTORY**3
Covers what history is, how it is produced, and what its functions are. Designed for students who want an introductory course which explains the methodology and purposes of the discipline.

HUMAN ECOLOGY

HE124 **NUTRITION**3
Designed to support the concept that achieving and maintaining optimal nutritional status is an essential component of health promotion. A molecular approach to nutrition is used as a basis for understanding the importance of nutrition in health and disease. Facts and principles are included to give the student a basic nutritional background to later enhance high quality nutritional care. The information acquired in this course will be used as the basis for understanding therapeutic nutrition.

EARLY CHILDHOOD EDUCATION

***HE095** **ORIENTATION TO EARLY CHILDHOOD DEVELOPMENT**2

A supplemental course to accompany HE150, Early Childhood Development, and is designed to aid the student who has scored below 74 on the reading and below 78 on the writing of the Accuplacer test, or below 41 on the ASSET test, or below 21 on the ACT test, or who indicated that they would like additional assistance with the course. Included will be review of the lectures in a discussion format, computer aided instruction, additional videos to explain concepts, and the use of chapter vocabulary worksheets and review questions for the HE150 lectures.

***HE144** **INCLUSIVE EARLY CHILDHOOD EDUCATION** ...3

A study of the research applications of how special children are included in the inclusive educational and day care settings. Emphasis will be placed on proven recommendations for inclusion merging early childhood education and early childhood special education philosophies.

***HE147** **PRINCIPLES OF THE CHILD DEVELOPMENT ASSOCIATE CREDENTIAL**3

Focuses on the preparation for the Child Development Associate (C.D.A.) credential. The students will write their competency statements, prepare their Professional Resources File and study for the Early Childhood Studies Review. A person who has met the criteria established by the Council for Early Childhood Professional Recognition earns the CDA Credential. Successful completion of this course does not guarantee the granting of the C.D.A. by the Council for Early Childhood Professional Recognition.

***HE149** **INTRODUCTION TO EARLY CHILDHOOD EDUCATION**1

An introduction to employment opportunities in Early Childhood Education. An overview of philosophies, ethics and developmentally appropriate practice will offer students a look into what they can expect from this field.

***HE150** **EARLY CHILDHOOD DEVELOPMENT**3

A study of the physical, cognitive, affective, social, and emotional development of the child from conception to age eight. Emphasis is on the interrelationship of growth and behavior of the preschool child. Included will be the influence of cultural environment on development and individual differences in development.

***HE151** **EARLY CHILDHOOD DEVELOPMENT LAB**1

The student will observe and learn about cognitive, emotional, social and physical development of the child from birth to age eight. The student will also learn proper observation techniques to be used for tracking healthy development.

Course Descriptions

***HE152 INTERACTION TECHNIQUES WITH YOUNG CHILDREN3**

A study of the guidance approaches which can be used to interact with and guide young children in a group or family setting. Communication skills and development of a positive self-concept will be emphasized.

***HE153 CREATIVE ACTIVITIES FOR YOUNG CHILDREN.....3**

An introduction to various learning activities which may be used with preschool aged children in a group setting, focusing on selection, preparation, and presentation. Prerequisite: Successful completion of HE150.

***HE154 CREATIVE ACTIVITIES FOR YOUNG CHILDREN LAB1**

A laboratory experience to plan, prepare, present, and evaluate a variety of activities for preschool aged children.

***HE155 PARENT, PROVIDERS, AND COMMUNITY RELATIONSHIPS3**

A study of Early Childhood Education provider's interrelationships with parents, colleagues, and the community. Topics included are public relations, family diversity and development, asset building, evaluations, parent meetings, parent-teacher communications, and professionalism.

***HE156 DEVELOPMENTAL PROGRAM PLANNING FOR YOUNG CHILDREN OVER 2.5.....3**

A study of the techniques of curriculum planning for young children over 2.5 years in a group setting, emphasizing the organization of activities into complete unit plans and year long plans. Assessment techniques and accountability in terms of curriculum will be emphasized.. Prerequisite: Successful completion of HE152, HE153, and HE154.

***HE157 DEVELOPMENTAL PROGRAM PLANNING FOR YOUNG CHILDREN OVER 2.5 LAB1**

Students will participate in various activity centers in a child care facility and will teach segments of the unit plans developed in Developmental Program Planning. Prerequisite: Successful completion of HE154 with a C or better.

***HE158 DIRECTED FIELD EXPERIENCE6**

A supervised practicum in which students are responsible for daily planning, preparation, presentation, and evaluation of activities meeting developmental needs of children in an approved licensed child care facility. A minimum of 350 on-site hours is required for the semester. Weekly on-campus seminars. Prerequisite: Successful completion of HE156 and HE157 with a C or better and approval of instructor.

***HE159 DIRECTED FIELD EXPERIENCE SEMINAR1**

Designed to facilitate the experience the students have in the approved licensed Child Care Facility. Topics of interest relevant

to the learning taking place in the Centers will be discussed. Daily journals will be kept to facilitate optimal learning for the students. Must be taken concurrently with HE158.

***HE160 CHILD CARE ADMINISTRATION AND ORGANIZATION3**

An analysis of the administrator's role in the Early Childhood Education Center. Application of philosophical approaches, communication techniques, and management skills necessary to operate early childhood programs. Federal, State, and local regulations and support systems will also be discussed.

***HE161 HEALTH & NUTRITION FOR YOUNG CHILDREN3**

A study of the health, safety, and nutritional needs of children (prenatal to age 8). Emphasis will be placed on the methods in which these health, safety, and nutritional needs can be met in a child care facility..

***HE162 CHILD CARE MANAGEMENT.....1**

A reflective course dealing with management style as it relates to child care and guidance. The practical application of management principles as they relate to child care and guidance will be emphasized.

***HE163 PARENTING3**

A study of varying approaches to parenting and their impact on the child's behavior and development. The major content of the course concerns preparing for parenthood using the democratic approach to parenting.

***HE164 DEVELOPMENTAL PROGRAMS PLANNING FOR YOUNG CHILDREN UNDER 2.53**

Focuses on the development of the child ages birth to thirty-six months and how to plan for this child in group care. Emphasis will be placed upon the parent-child relationship, parent-teacher relationship, child-teacher relationship, and development of the child.

***HE165 DEVELOPMENTAL PROGRAMS PLANNING FOR YOUNG CHILDREN UNDER 2.5 LAB1**

Focuses on developing appropriate care giving behaviors for working with infants and toddlers. Focus will be placed upon developing care giving skills through direct involvement with the children. The semester will be shared between the infants and toddlers.

***HE168 FAMILY AND CULTURAL PERSPECTIVES.....3**

An overview of diversity topics in early childhood education. Material covered may include, but is not limited to, reviewing personal biases, relationships with families, preparing the early childhood environment, sensitivity to diversity and conflict resolution.

Course Descriptions

HE220 COOPERATIVE EDUCATION INTERNSHIP..... 1-6
See CA220.

* A lab fee will be assessed for these courses.

HUMANITIES

HU201 HUMANITIES I3
Humanities I is designed to help you gain a richer understanding and enjoyment of the humanities, particularly in Western culture. This course includes an overview of the history of Western cultures between 1600 and the early 1800's and introduces great works of literature, philosophy, art, and music. As an interdisciplinary course, it seeks to show how these different elements contribute to and express human creativity and values. Prerequisite: English Composition I.

HU202 HUMANITIES II.....3
Humanities II promotes the understanding and enjoyment of the humanities in Western culture. This course includes an overview of the history of Western cultures from the 1830's to present time and introduces great works of literature, philosophy, art, and music. As an interdisciplinary course, it seeks to show how these different elements contribute to and express human creativity and values. Humanities I is not a prerequisite for Humanities II. Prerequisite: English Composition I.

INDUSTRIAL EDUCATION

IE116 OSHA 10-HOUR CONSTRUCTION TRAINING ... 1/2
This course is intended to provide an entry level construction worker with broad awareness in recognizing and preventing hazards on a construction site. It is also ideal for supervisors with safety and health responsibilities. OSHA recommends the training as an orientation to occupational safety and health. Students will be introduced to OSHA policies, procedures, and standards. Emphasis will be placed on hazard identification, avoidance, control, and prevention. Upon successful completion of the course, participants will receive an OSHA 10-Hour Construction DOL Course Completion Card by mail.

IE117 OSHA 10-HOUR GENERAL INDUSTRY TRAINING.....1
This course is intended to provide an entry level general industry worker with broad awareness in recognizing and preventing hazards on a general industry site. It is also ideal for supervisors with safety and health responsibilities. The course covers a variety of safety and health hazards which a worker may encounter. Students will be introduced to OSHA policies, procedures, and standards as well as general industry safety and health principles.

Emphasis will be placed on hazard identification, avoidance, control, and prevention. Upon successful completion of the course, participants will receive an OSHA 10-Hour General Industry DOL Course Completion Card by mail.

IE125 BLUEPRINT READING AND CUTTING PROCESSES2

In this course, students will learn the importance of blue-prints/working drawings in welding as well as a variety of cutting processes. Line conventions, drawing views, dimensioning, scales, and welding symbols will be explored. Students will describe and demonstrate oxyacetylene, plasma, and carbon arc cutting following shop drawings.

IE126 SHIELDED METAL ARC WELDING3
Through classroom and/or lab/shop learning and assessment activities, students in this course will: describe the Shielded Metal Arc Welding process (SMAW); demonstrate the safe and correct set up of the SMAW workstation; associate SMAW electrode classifications with base metals and joint criteria; demonstrate proper electrode selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes in the flat position; build pads of weld beads with selected electrodes in the horizontal position; perform basic SMAW welds on selected weld joints; and perform visual inspection of welds

IE127 GAS METAL ARC WELDING.....3
Through classroom and/or shop/lab learning and assessment activities, students in this course will: explain gas metal arc welding process (GMAW); demonstrate the safe and correct set up of the GMAW workstation.; correlate GMAW electrode classifications with base metals and joint criteria; demonstrate proper electrode selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes in the flat position; build pads of weld beads with selected electrodes in the horizontal position; produce basic GMAW welds on selected weld joints; and conduct visual inspection of GMAW welds.

IE128 FLUX CORE ARC WELDING.....3
This course focuses on the Flux Cored Arc Welding (FCAW) process. Students in this course will describe and demonstrate Flux Cored Arc Welding through classroom and shop learning. Proficiency in welding in all positions according to AWS standard will be stressed.

IE129 GAS TUNGSTEN ARC WELDING3
Through classroom and/or lab/shop learning and assessment activities, students in this course will: explain the gas tungsten arc welding process (GTAW); demonstrate the safe and correct set up of the GTAW workstation; relate GTAW electrode and filler metal classifications with base metals and joint criteria; build proper electrode and filler metal selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes

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and filler material in the flat position; build pads of weld beads with selected electrodes and filler material in the horizontal position; perform basic GTAW welds on selected weld joints; and perform visual inspection of GTAW welds.

IE150 NATURAL/PROPANE GAS & ELECTRICAL SYSTEM SAFETY3

This course provides instruction to plumbers, electricians, and heating/air personnel in the proper techniques and procedures for working with natural or propane installations; as well as electrical lock-out/tag-out. The course covers the components of a gas system, sizing of piping, proper purging of a system, differences between a leak test and a pressure test, flow test, various safety issues, hands-on training with pipe/fitting display boards, demonstration of various testing equipment, and lock-out/tag-out per OSHA regulations.

JOURNALISM

JN100 ▸ MASS MEDIA IN SOCIETY3

A general survey of the various mediums of mass communication, including print media and electronic media and movies, and their roles in American society.

JN101 BASIC MEDIA WRITING.....3

Explores mass media sources of information, the preparation and the application of the media message. After learning techniques for information gathering, students will study and practice the fundamentals of writing for each of the mass media outlets.

JN140 BEYOND WEB 2.0: SOCIAL MEDIA AS IDENTITY .3

For today's college students, digital communication is the norm, but what does it mean to exist in an online community? Tools like Facebook, Twitter, and text messaging are prevalent and you can learn to use them all to maintain privacy, enhance reputation, and build a more satisfying personal and professional life online. This course proposes to make every enrolled student an astute digital learner. Students will also understand the sociocultural implications of their digital existence and the powerful marketing tool that is social media.

JN220 COOPERATIVE EDUCATION INTERNSHIP 1-6 See CA220.

* A lab fee will be assessed for these courses.

MANAGEMENT

MG101 ▸ MANAGEMENT PRINCIPLES3

Is an introductory course designed to provide the student with fundamental concepts and terminology. Designed for

development of managerial techniques and practices and the understanding of their utilizations. For both terminal degree and transfer students.

MG102 INTRODUCTION TO ENTREPRENEURSHIP3

In this course you will find information on high growth, start-up ventures, such as Dell Computer, Google and Microsoft (all started while the founders were college students, by the way!). But more importantly you will find information on the kinds of small businesses most people really do start. These are small businesses in traditional industries and markets from the "Mom and Pop" retail, a manufacturing or service business, a web-based enterprise to the sophisticated, pre-packaged franchise operation. According to the textbook authors, small businesses are vitally important to our economy and helping them survive has long been an art. In this course you will study the art and the science of small business management. The objective of the course is to help you understand the challenge before you operate your own small business.

MG220 COOPERATIVE EDUCATION INTERNSHIP 1-6 See CA220.

MATHEMATICS

(Courses numbered 099 and below will not apply toward graduation.)

MA092 COLLEGE ALGEBRA APPLICATIONS.....2

This course is designed and structured to support College Algebra students who have appropriate test scores. Students in the prescribed range of test scores must be enrolled in this course and a paired section of MA111 College Algebra or they may enroll in MA110 Intermediate Algebra.

MA099 ELEMENTARY ALGEBRA3

This course is designed for students with little or no high school algebra, or those who have appropriate math scores on the ACT or Accuplacer exam. Topics covered will include properties of the graphs of linear equations, polynomials, factoring rational expressions, and radicals.

MA104 TECHNICAL MATH.....3

This course is intended as a terminal course for students seeking an AAS degree or various certificates. This course will not fulfill prerequisites for either Intermediate Algebra or College Algebra, and will not serve as a replacement for these classes to satisfy degree requirements for mathematics courses. This course covers the mathematics commonly used in technical fields at an elementary level. Topics covered may include, but are not limited to, the following: review of arithmetic operations and the Order of Operations agreement, simplifying various algebraic expressions, solving various types of equations, setting up and solving ratios,

Course Descriptions

proportions and variation problems, rules for how to work with exponents and radicals, conversion of measurements between different systems, formulas for perimeter, area and volume of basic geometric objects, angles and trigonometric ratios, and personal finance tools and technologies. Prerequisite: none

MA107 MEDICAL MATHEMATICS1

This course covers application problems involving medical dosages and intravenous fluid rates. Students who need orientation to the mathematical procedures of medication calculations will benefit from this course.

MA110 ▸ INTERMEDIATE ALGEBRA3

This course is designed for students who are inadequately prepared for College Algebra. Topics covered will include linear equations and inequalities, functions, systems of linear equations, polynomials, exponents, rational expressions, radical expressions, and quadratic equations. Prerequisite: appropriate test scores or Elementary Algebra with a grade of C or better.

MA111 ▸ COLLEGE ALGEBRA3

This course reviews standard topics of algebra. Students will study linear and quadratic equations, functional notation, linear, quadratic, rational, logarithmic and exponential functions, systems of equations and inequalities, and matrix algebra. Other topics may be covered at the instructor's discretion. Prerequisite: appropriate test scores or Intermediate Algebra with a grade of C or better.

MA112 ▸ TRIGONOMETRY3

Is a study of trigonometric functions and their applications, solutions to right and oblique triangles, trigonometric identities, inverse functions, graphs of trigonometric functions, and vectors. Prerequisite: appropriate test scores or College Algebra with a grade of C or better.

MA114 ▸ ELEMENTARY STATISTICS3

This course is designed for students with adequate algebra background to cover introductory, non-calculus based statistics. Topics covered will include sampling and displaying data, measures of central tendency and variation, introductory probability theory, discrete probability distributions (binomial), normal distributions, standard normal distributions, sampling distributions and the central limit theorem, estimating parameters, hypothesis testing, regression and correlation, chi-square, and non-parametric statistics. Prerequisite: College Algebra with a C or better.

MA115 ▸ GENERAL CALCULUS3

This course is an introduction to calculus particularly useful to economics and business administration students. It requires no knowledge of trigonometry, and is not intended for a student seeking a degree in a science related field. Topics covered include limits, derivatives, multivariate calculus, and basic integrals. Practical applications include optimization, analysis of graphs for sales and marketing purposes, and marginal analysis. Prerequisite: College Algebra with a C or better.

MA120 ▸ ANALYTIC GEOMETRY AND CALCULUS I5

This course reviews inequalities, linear equations, function notation, graphing and trigonometry. Students will study limits, continuity, derivatives, differentials, L'Hopital's Rule, and integrals. Practical applications include graphing, motion, optimization, related rates, Newton's Method, and L'Hopital's Rule, and area. Prerequisite: appropriate test scores or College Algebra and Trigonometry with grades of C or better.

MA121 ANALYTIC GEOMETRY AND CALCULUS II5

This course picks up where MA120 left off with applications of integration. Develops calculus as applied to logarithmic and exponential functions. Students study limits, techniques of integration, infinite series, parametric equations and polar coordinates. Practical applications include growth and decay, Taylor series, surface area, work and arc length. Prerequisite: Analytic Geometry and Calculus I with a C or better.

MA122 ANALYTIC GEOMETRY AND CALCULUS III5

Students will study vectors, vector functions, surfaces, differentiation, integration, cylindrical and spherical coordinates, and vector calculus. Practical applications will include arc length, area, volume, and optimization. Prerequisite: Analytic Geometry and Calculus II with a C or better.

MA123 DIFFERENTIAL EQUATIONS4

This course is the study of qualitative and quantitative behavior of first- and second-order differential equations, as well as systems of first-order equations. Both analytical and numerical methods for solution will be studied, including the use of Laplace transforms. Prerequisite: Analytic Geometry and Calculus III with a C or better.

MA130 ▸ CONTEMPORARY MATH3

Explores the uses of mathematics in different settings. Applications are seen in the contemporary world, across different disciplines. Topics will include, but are not limited to, the following: critical and logical thinking, statistics and probability, the application of mathematics to social issues such as voting, and financial applications. Prerequisite: MA 110 Intermediate Algebra with a grade of C or better or instructor approval.

MA220 COOPERATIVE EDUCATION INTERNSHIP 1-6 SEE CA220.

MUSIC

MU100 ▸ MUSIC APPRECIATION3

Music Appreciation is a basic study of the development of the art of music (European based) and personal development of the art of creative listening through frequent use of recordings. Recommended for the general student and music major.

Course Descriptions

MU102 WORLD MUSIC3

Through the study of music from around the world, this course explores how music shapes and is shaped by the cultural settings in which it is performed. By learning about the musical elements and structures of diverse selections of world music, students will understand music as culture, human and social activity, and artistic expression.

MU103 HISTORY OF ROCK MUSIC3

This course will survey the history of rock music from 1950 to the present. Idioms covered will include early rhythm and blues, Southern influenced gospel and spirituals, rockabilly, the California “surf” sound, the British invasion, the Motown sound, pop and folk rock, contemporary Southern rock, heavy metal, funk, and modern hip-hop. Artists and music from these genres will be studied with special emphasis placed on the significance of music in development of popular culture.

MU104 CLOUD COUNTY COMMUNITY CHORALE1

The Cloud County Community Chorale is the community choir of Concordia and North Central Kansas. Comprised of singers from within the community as well as CCCC, the Chorale emphasizes the ideal of the “singing city” --friends and neighbors gathered together to rehearse and perform music from different time periods, with added emphasis on fostering arts and music within Concordia and the broader region. Rehearsals are held once weekly with performances throughout the year. No audition is required.

MU110 ▸ HARMONY AND EAR TRAINING I4

Harmony and Ear Training I is the study of the structure and components of western music. This study will include the fundamental concepts of notation, tonality, intervals, chords, melodic organization, rhythm, harmonic progression and analysis. Additional aural skills concepts of dictation and sight singing will also be covered.

MU111 ▸ HARMONY AND EAR TRAINING II4

Harmony and Ear Training II is the intermediate study of the structure and components of western music and builds on the concepts explored in Harmony and Ear Training I. This study will include supplemental concepts of notation, tonality, intervals, chords, melodic organization, rhythm, harmonic progression and analysis. Additional aural skills concepts of dictation and sight singing will also be covered. Prerequisite: Harmony and Ear Training I or consent of instructor.

MU112 HARMONY AND EAR TRAINING III4

Harmony and Ear Training III is an advanced level course with the addition of altered chords, ninth, eleventh and thirteenth chords and simple and complex methods of modulation, plus advanced ear training procedures including harmonic as well as melodic dictation and sight singing. Prerequisite: Harmony and Ear Training II.

MU113 HARMONY AND EAR TRAINING IV4

Is a continuation of Harmony and Ear Training III. Prerequisite: Harmony and Ear Training III.

MU117 COLLEGE BAND1

The “Rolling Thunder” is the college activity band. This ensemble rehearses twice per week and performs in a college service capacity at athletic contests and other appropriate campus and community events.

MU118 COLLEGE BAND II1

This course is a continuation of College Band. The “Rolling Thunder” is the college activity band. This ensemble rehearses twice per week and performs in a college service capacity at athletic contests and other appropriate campus and community events.

MU119 COLLEGE BAND III1

This course is a continuation of College Band II. The “Rolling Thunder” is the college activity band. This ensemble rehearses twice per week and performs in a college service capacity at athletic contests and other appropriate campus and community events.

MU126 CONCERT BAND1

Concert Band rehearses one day weekly and will perform a formal concert each semester. Literature performed will be from the traditional as well as modern band repertoire and will include works from such representative composers as Gustav Holst, Ralph Vaughan-Williams, John Philip Sousa, and Johan DeMeij. Prerequisite: Proficiency on a traditional wind or percussion instrument.

MU127 JAZZ ENSEMBLE1

Jazz Ensemble is a small instrumental group designed to perform in the popular idiom, including rock, soul, folk type, and country music. This group is primarily a public performing ensemble that is small enough to be mobile yet large enough to perform all types of music in the popular fields. By audition. Jazz meets three times a week for fifty-five minutes each, one hour credit.

***MU130 APPLIED MUSIC: VOICE1**

Applied Music: Voice provides the opportunity for the student to improve his singing skills in a direct teacher-to-student instructional setting. Technical skills and their application will be explored within a varied song repertoire.

***MU131 APPLIED MUSIC: INSTRUMENT1**

Applied Music: Instrument is for individual instruction in instrument of student’s choice beginning with student’s level of competency.

***MU132 ▸ APPLIED MUSIC: PIANO1**

Applied Music: Piano is for individual instruction in piano

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beginning with the student's level of competency and developing piano techniques and building a repertoire.

***MU134 APPLIED MUSIC: VOICE II.....1**
Applied Music: Voice II is a continuation of Applied Music: Voice. It involves private instruction in voice techniques. Appropriate skills and applications will be addressed through preparation of appropriate literature for recital performance.

***MU135 APPLIED MUSIC: INSTRUMENT II1**
Applied Music: Instrument II is a continuation of Applied Music: Instrument. It involves private instruction in instrumental techniques. Appropriate skills and applications will be addressed through preparation of appropriate literature for recital performance.

***MU136 APPLIED MUSIC: PIANO II1**
Applied Music: Piano II is a continuation of Applied Music: Piano. It involves private instruction in piano techniques. Appropriate skills and applications will be addressed through preparation of appropriate literature for recital performance.

***MU137 APPLIED MUSIC: VOICE III1**
Applied Music: Voice III is a continuation of Applied Music: Voice II. It involves private instruction in piano techniques. Appropriate skills and applications will be addressed through preparation of appropriate literature for recital performance.

***MU138 APPLIED MUSIC: INSTRUMENT III.....1**
Applied Music: Instrument III is a continuation of Applied Music: Instrument II. It involves private instruction in piano techniques. Appropriate skills and applications will be addressed through preparation of appropriate literature for recital performance.

***MU139 APPLIED MUSIC: PIANO III.....1**
Applied Music: Piano III is a continuation of Applied Music: Piano II. It involves private instruction in piano techniques. Appropriate skills and applications will be addressed through preparation of appropriate literature for recital performance.

MU146 CHAMBER SINGERS.....1
Chamber Singers is the flagship ensemble of CCCC that performs for college, community and area events. Emphasis is placed on performance, literature and musicianship. This ensemble performs frequently. Membership is by audition.

MU147 CHAMBER SINGERS II1
Chamber Singers II is a continuation of Chamber Singers. Chamber Singers is the flagship ensemble of CCCC that performs for college, community and area events. Emphasis is placed on performance, literature and musicianship. This ensemble performs frequently. Membership is by audition.

MU148 CHAMBER SINGERS III.....1
Chamber Singers III is a continuation of Chamber Singers II. Chamber Singers is the flagship ensemble of CCCC that performs for college, community and area events. Emphasis is placed on performance, literature and musicianship. This ensemble performs frequently. Membership is by audition.

MU160 CONCERT CHOIR1
Concert Choir is a large, mixed-voice ensemble that performs for collegiate and community events. Emphasis is placed on developing musical skills, exploring diverse musical literature, and offering a challenging and satisfying musical experience. Rehearsals are held twice weekly. No audition is required.

MU160 CONCERT CHOIR II1
Concert Choir II is a continuation of Concert Choir.

MU220 COOPERATIVE EDUCATION INTERNSHIP 1-6
See CA220.

* A lab fee will be assessed for these courses.

NURSING

***NR110 HEALTH ASSESSMENT FOR NURSES3**
This course is designed to provide students with a basic understanding and working knowledge of health assessments to begin making clinical judgments. Opportunities are provided for students to demonstrate competencies of the individual across the life span. Emphasis is placed on the interview process and recognition of expected findings for history and physical examination of each system. Prerequisite: Anatomy & Physiology, Human Growth & Development, Intermediate Algebra or higher with a grade C or higher, admission to the associate degree nursing program, and NR111 taken concurrently or completed with an 80% (B) or higher.

***NR111 LIFESPAN NURSING I.....6**
This course is an introduction to the professional role of the nurse and nursing process. Foundational psychomotor skills, safe practice, and basic communication skills are taught to provide care to adults and older adults. Requisite lab and clinical experiences are part of this course. Prerequisite: Anatomy & Physiology, Human Growth and Development, General Psychology, Intermediate Algebra or higher with grade C or higher, admission to the associate degree nursing program, and NR110 taken concurrently or completed with an 80% (B) or higher.

***NR112 LIFESPAN NURSING II9**
This course is an introduction to the care of healthy families, health promotion, and patient centered care associated with common acute and chronic physical and psychosocial health alterations across the lifespan. Requisite lab and clinical experiences

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are part of this course. Prerequisite: Successful completion of Lifespan Nursing I and Health Assessment for Nurses with a grade of 80% (B) or higher.

***NR114 PHARMACOLOGY II.....2**

This course focuses on nursing implications associated with pharmacologic therapy for patients across the lifespan experiencing acute and chronic health alterations. Prerequisite: Successful completion of Lifespan Nursing I and Health Assessment for Nurses with a grade of 80% (B) or higher.

***NR115 PHARMACOLOGY III2**

In this course, students continue their study of pharmacology and nursing implications across the lifespan. Specific prototypes of selected drug classifications provide the framework for understanding the action, use, adverse effects and nursing implications of medications. The nurse's role in drug administration, assessment, and patient education are emphasized. Prerequisite: Pharmacology II with grade 80% (B) or higher or admission to the Nursing Program with Advanced Standing.

NR128 PATHOPHYSIOLOGY4

Focuses on pathophysiologic concepts related to the functional and structural changes that accompany disease processes and the application of basic concepts to body systems and selected disease processes. Etiologies, signs, symptoms, courses, and complications of common diseases of the following organ systems are included: neurologic, endocrine, reproductive, hematologic, cardiovascular, lymphatic, pulmonary, renal and urologic, digestive, musculoskeletal, and integumentary. This course is a four hour lecture class. This course has no lab. Prerequisite: SC126 Anatomy and Physiology or SC120 Human Anatomy and Physiology I and SC121 Human Anatomy and Physiology II. Dual listed with SC128.

***NR210 LPN TO RN BRIDGE COURSE.....1**

This course focuses on professional standards, scope of practice, clinical reasoning and psychomotor skills for the Registered Nurse. Prerequisite: Completion of a practical nurse program, LPN licensure or candidate for licensure, admission to the ADN program, Anatomy and Physiology, Human Growth and Development, Intermediate Algebra, and Pathophysiology.

***NR211 LIFESPAN NURSING III9**

This course builds to provide care for patients with complex, acute and chronic, physical and psychosocial health problems. The concepts of prioritization and clinical judgment are incorporated to provide care for patients across the lifespan. Requisite lab and clinical experiences are part of this course. Prerequisite: Successful completion of Lifespan Nursing II, Pharmacology II with a grade 80% (B) or higher. (or) LPN licensure, Concurrent NR210, Anatomy and Physiology, Human Growth and Development, General Psychology, English Composition I, Intermediate Algebra, Pathophysiology with a grade C or higher and admission to the ADN program.

***NR212 LIFESPAN NURSING IV9**

This course addresses emergent and multisystem healthcare problems. It supports the transition of the student to the professional role of the nurse. Requisite lab and clinical experiences are part of this course. Prerequisite: Pharmacology II and Lifespan Nursing III with a grade 80% (B) or higher.

NR220 COOPERATIVE EDUCATION INTERNSHIP..... 1-6
See CA220.

* A lab fee will be assessed for these courses.

PHYSICAL EDUCATION

PE101 TEAM SPORTS I.....1

Is designed to give the student an opportunity to participate in physical education activities of a team nature. Areas of interest includes, but are not limited to, soccer, men's basketball, women's basketball, volleyball, baseball, softball, and men's and women's track.

PE102 TEAM SPORTS II1

Is designed to give the student an opportunity to participate in physical education activities of a team nature. Second semester activities are basketball, volleyball, and softball.

***PE108 ARCHERY1**

Is designed for students interested in the sport of archery. The course will teach the student fundamentals in archery skills and competition.

PE110 TOTAL FITNESS.....1

Is designed to bring about changes in the body as manifested by physical exercise. This course can be physically demanding, but very satisfying for those interested in improving their physical condition. Students will be informed on how to correctly use all of the equipment in the fitness center, and will have the opportunity to ask questions of the instructor or the fitness center staff member on duty when working out.

PE125 FITNESS FOR LIFE.....1

The primary purpose of this course is to acquaint students with a basic knowledge, understanding and value of physical activity as related to optimal healthful living.

PE126 CHEERLEADING I1

Is designed to teach the student the fundamentals of cheerleading. This is a first level cheer class. Students will learn beginning stunting including the preparation and practice of routines, weight conditioning programs, knowledge of personal health and self-motivation, as well as focusing on cheer techniques. Students will also learn cheer terminology, choreography, and other related topics. (With approval of Cheer Coach.)

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PE127 CHEERLEADING II1
 Is designed to teach the student the fundamentals of cheerleading. This is the second level of cheerleading. Students will be expected to be role models and help teach the advanced stunting to the first level students. This includes the preparation and practice of routines, weight conditioning programs, knowledge of personal health and self-motivation, as well as focusing on stunting techniques. Students will also learn stunting terminology, choreography, and other cheer related topics. (With approval of Cheer Coach.)

PE128 DANCE TEAM I.....1
 Is designed to teach the student the fundamentals of dance. This is a first level dance class that will include the preparation and practice of routines, weight conditioning programs, knowledge of personal health and self-motivation, as well as focusing on jazz, hip hop, lyrical, and modern dance techniques. Students will also learn dance terminology, choreography, and other dance topics. (With approval of Dance Coach.)

PE129 DANCE TEAM II1
 Is designed to teach the student the fundamentals of dance. This is a second level class where the students will be more involved with helping demonstrate techniques and will include the preparation and practice of routines, weight conditioning programs, knowledge of personal health and self-motivation, as well as focusing on jazz, hip hop, lyrical, and modern dance techniques. Students will also learn dance terminology, choreography, and other dance related topics. (With approval of Dance Coach.)

PE130 INTRODUCTION TO PHYSICAL EDUCATION.....3
 Surveys the modern program of physical education, fitness and sport as to its history, philosophy, aims and objectives. It covers a broad scope of topics including personal fitness, scientific foundations, exploring careers professional development, coaching and athletics and social foundations.

***PE131 ▸ FIRST AID AND SAFETY3**
 Acquaints the student with safety and first aid (treating injuries and sudden illnesses) in the home, school, and community. The National Safety Council first aid course and American Heart Association Heartsaver and Healthcare Provider courses are offered.

PE132 RULES AND OFFICIATING.....1
 This course is designed for those who want to stay engaged in athletics beyond playing. Topics covered will include general principles of officiating, rule knowledge, situational awareness, as well as tax information and earning potential. Students will participate in 16 one-hour classes in which they will participate in group discussions, share positive experiences with others, submit article summaries, and take the mid-term and final. The course covers football (1st 8 weeks) and basketball (last 8 weeks). There will be opportunities for extra credit involving actual officiating

experiences in games. The course will prepare students to register with the National Federation of State High Schools Association and to become certified officials.

PE134 PERSONAL AND COMMUNITY HEALTH3
 The study of personal health and wellness of the individual. The course examines several areas of wellness to include the physical, psychological, social, intellectual, spiritual, and environmental dimensions. The student will assess him/herself in numerous areas of lifestyle (i.e. stress, physical fitness, nutrition, destructive behaviors, communicable diseases, chronic diseases) and examine ways to improve his/her health for the future.

PE135 CONCEPTS OF PHYSICAL EDUCATION.....1
 The primary purpose of this course is to acquaint students with a basic knowledge, understanding and value of physical activity as related to optimal healthful living. The course will include physical fitness assessment, exercise prescription, nutrition, weight management and stress management.

PE136 THEORY OF COACHING3
 A comprehensive introduction to the art and science of coaching. This course introduces a positive coaching philosophy, the principles of coaching as digested from the fields of sport psychology, sport pedagogy, sport physiology, sport medicine, and sport management. This course includes American Sport Education Program Coaching Principles certification (K.S.H.S.A.A. - Level 1 certification)

PE137 INTRODUCTION TO RECREATION3
 This course is designed to introduce the student to the nature, scope and history of recreation, leisure services, and outdoor education. It examines trends and issues of leisure studies and out-of-door recreation, and potential of these areas of service as a profession.

PE139 TECHNIQUES OF COACHING BASKETBALL2
 Is designed to provide coaches with the skills needed to organize and develop a quality basketball program. It will include basketball techniques, strategies, theories, philosophies of offense and defense, also organizational, administrative skills to handle parents, players, assistant coaches and school personnel. Class will consist of lectures, small group activity, videos, observations and gymnasium activity.

PE140 TECHNIQUES OF COACHING VOLLEYBALL2
 Is designed to provide coaches with the skills needed to organize and develop a quality volleyball program. It includes volleyball techniques and tactical strategies (offenses and defenses) of the game.

PE141 ▸ PERSONAL WELLNESS.....3
 The study of personal health and wellness of the individual. The

Course Descriptions

course examines several areas of wellness to include the physical, psychological, social, intellectual, spiritual, and environmental dimensions. The student will assess him/herself in numerous areas of lifestyle (i.e. stress, physical fitness, nutrition, destructive behaviors, communicable diseases, chronic diseases) and examine ways to improve his/her health for the future.

PE143 TOTAL FITNESS II1
 This class is designed to bring about continued changes in the body as manifested by increased amounts of physical exercise. This course is physically demanding, but very satisfying for those interested in continuing to improve their physical condition. Prerequisite: Total Fitness.

***PE144 ARCHERY II.....1**
 This class is designed for students interested in the sport of archery. This course is designed to teach the student more advanced archery skills and levels of competition.

PE146 CONCEPTS OF TEAM SPORTS.....3
 This course is to provide learning experiences that will lead to the development of basic skills in team sports. In addition to skill acquisition, the course will focus on how to plan, implement, and explain the different sports/activities that are presented. An emphasis will be placed on the use of the game stages and movement framework as a guide for designing a variety of sport game experiences. Students will be expected to achieve an intermediate level of skill in the selected team sports. Practice outside of class time may be necessary for some students to achieve the expected performance level.

PE148 INTRODUCTION TO SPORTS MANAGEMENT3
 Introduction to the discipline of sports management and its vast array of career opportunities. Successful management is required in all segments of the sport industry whether professional or amateur, private or public, school-related or club, community or national, and at all levels of competition.

PE150 ▸ BASIC CARE AND PREVENTION OF ATHLETIC INJURIES I3
 Is designed for students interested in the prevention and care of athletic injuries. Basic principles of all aspects of athletic training are covered. Through lectures on specific injuries and practical lab experiences, the student will learn how to recognize and care for common athletic injuries. This course is open to all students, it is a first semester requirement for students in the Athletic Training Program.

PE151 BASIC CARE AND PREVENTION OF ATHLETIC INJURIES II3
 This course is designed for students interested in the evaluation, treatment, and rehabilitation of upper extremity athletic injuries. The anatomy involved in specific injuries that commonly occur in athletics and evaluation techniques will be emphasized. The use of therapeutics modalities and rehabilitation exercises for athletic

injuries will be presented. Through lectures on specific injuries and practical lab experiences the student will learn about basic athletic training. This course is open to all students. This course is a second semester requirement for students in the Athletic Training program. Prerequisite: Basic Care & Prevention of Athletic Injuries I with passing grade or consent of instructor.

PE155 RECOGNITION & CARE OF ATHLETIC INJURIES..3
 This course will acquaint the student with the first-response recognition, evaluation and treatment techniques for more than 110 sport related injuries and illnesses. It will cover treatment of injuries and illness, injury prevention, as well as cardiopulmonary resuscitation (CPR) for young adults. This course includes American Sport Education Program Sport First Aid Certification (K.S.H.S.A.A. - Level 2 certification).

PE156 ▸ PRINCIPLES OF STRENGTH & CONDITIONING2
 This course is designed to provide students with the theoretical and practical knowledge of the physiological, biomechanical and administrative aspects of designing and supervising safe and effective strength and conditioning programs for youth through adult populations.

PE160 VARSITY SPORTS: BASEBALL.....1
 A sport for baseball players. It begins the first day of classes for the fall semester and ends with the regional and national baseball tournaments in May. Baseball consists of skill development, intended to produce a competitive baseball team, in pitching, fielding and hitting skills.

PE161 VARSITY SPORTS: BASKETBALL1
 A sport for basketball players. Practice begins the first of October and concludes in March. Preseason conditioning starts four weeks preceding regular practice. Players will practice six days a week and play approximately 30 regular season games.

PE162 VARSITY SPORTS: TRACK1
 A sport for track and field athletes. Athletes are expected to participate in all practices and meets scheduled by the coach.

PE165 VARSITY SPORTS: SOFTBALL.....1
 A sport for softball players, which includes Fall and Spring Semester participation. Softball consists of daily practices and a schedule of approximately 20 games in the Fall and 50 games in the Spring.

PE167 VARSITY SPORTS: CROSS COUNTRY1
 A sport for distance runners. It begins in August or at the start of the Fall Semester and ends with the National Championship in November. Cross country consists of a variety of hill, road and track workouts to better develop the cardiovascular system.

PE168 VARSITY SPORTS: VOLLEYBALL1
 This class is designed to bring about changes in the body as

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manifested by physical exercise. This course can be physically demanding, but very satisfying for those interested in improving their physical condition. Students will be informed on how to correctly play the game of volleyball, and will have numerous opportunities to play the game as well. Also students will be provided the opportunity to ask questions of the instructor training or competing.

PE169 VARSITY SPORTS: WRESTLING1

A sport for wrestlers. The course begins the first day of classes for the fall semester and ends with the regional wrestling tournaments in February. Wrestling consists of skill development intended to produce a nationally competitive NJCAA wrestling program in all aspects.

PE185 VARSITY SPORTS: BASKETBALL II.....1

Students will comprehend and demonstrate the fundamental skills of shooting, passing, dribbling, and rebounding the basketball. Students will learn to analyze and demonstrate these skills within a competitive environment. This course is a continuation of Varsity Sports: Basketball.

PE220 COOPERATIVE EDUCATION INTERNSHIP 1-6

See CA220.

PE250 STRESS MANAGEMENT3

This course will study the mind-body relationship and the psychophysiology of stress including the relationship of the stress reaction to specific illnesses and disease. The course will cover an understanding of the basic principles of stress management through coping skills, the study of the mind-body relationship in stress management, cognitive reappraisal of daily life stressors, and techniques to deal with these stressors. The cognitive strategies and relaxation techniques are cornerstones for optimal health and can help one manage stressors in a healthful and productive manner.

* A lab fee will be assessed for these courses.

PHARMACY TECHNICIAN

PM104 PHARMACY TECHNICIAN I.....5

This course is an introduction to the pharmacy technician field by covering general pharmacy topics such as history, laws and regulations, pharmacy technician roles, body systems, drug classifications, basic concepts for pharmacy, begin basic patient prescription processing, and career information. This course examines the various drug classes, mechanisms of action, calculations, and the pharmacy technician's role in best practice with patient safety.

PM105 PHARMACY TECHNICIAN II55

The course builds to provide a comprehensive introduction to further prepare students for employment in community, institutional, and other pharmacy settings covering the laws, regulations, and ethics that guide the practice. A focus on complex calculations, forms of non-sterile and sterile compounding of pharmaceuticals, preparation of intravenous admixtures, inventory management, and the role of pharmacy technicians in the hospital, specialty, and institutional setting. Covering institutional and pharmacy organization, operation, terminology, medication distribution systems, and packaging. Upon completion of this course students will be eligible to sit for the certification exam. Prerequisite: Successful completion of PM104 Pharmacy Technician I and MA107 Medical Mathematics with a grade of 80% (B) or higher.

PHILOSOPHY

PH100 ▸ INTRODUCTION TO PHILOSOPHY3

A survey course designed to increase the student's understanding of their own ideas, the ideas of philosophers, and the ideas of their fellow students. Topics covered include: logic, epistemology, ethics, pragmatism, and existentialism.

PH101 ▸ INTRODUCTION TO CRITICAL THINKING3

Designed to help students recognize inaccurate and fallacious reasoning and identify and practice good thinking. Students will apply the standards of good reasoning to traditional and contemporary ethical, social, economic and political problems.

PH105 ▸ ETHICS3

Explores basic concepts, theories, and methods of moral philosophy, their application to specific moral problems, and aspects of the rich history of moral philosophy. Traditional Ethical Philosophers are discussed such as Bentham, Mill, and Kant, to name a few. Moral problems and social issues such as abortion, capital punishment, business practices, and sexuality are examples of subjects examined from various viewpoints and philosophies.

RELIGION

RE104 ▸ WORLD RELIGIONS.....3

Discusses religions of mankind set in historical perspective. The course will focus upon the basic teachings of each of the major religions of the world, their founders, geographic distribution and importance in the theological world.

SCIENCE

***SC101 ▸ GENERAL BIOLOGY +4**

Engages the non-biology major in explorations of the unity and

Course Descriptions

diversity of organisms with particular attention devoted to the commonalities. Students are involved in various investigative simulations and extended laboratory activities. Study begins with the chemical foundation of life and culminates with interactions between organisms and environment. This course combines three hours lecture and one and one-half hours of laboratory time.

***SC103 ▸ PHYSICAL SCIENCE +5**

Is a study of man's physical world emphasizing fundamental universal laws and their implications in modern living through observations and analysis of sensible data. This study may include (but is not limited to) topics in the following areas: astronomy, chemistry, geology, meteorology, and physics. This course combines three hours of lecture and three hours of laboratory time. Prerequisite: Elementary Algebra with a C or better or appropriate Accuplacer/ACT scores.

***SC104 ▸ GEOLOGY +4**

This course provides a study of the basic landforms and geological processes. Topics include Earth structure and composition, erosional and depositional processes, minerals and rocks, stream flow, glaciation, plate tectonics, and groundwater. This course includes three hours lecture and one and one-half hours laboratory time.

***SC105 ▸ GENERAL ASTRONOMY +4**

This course is an introduction to space science designed to acquaint students with the history of astronomy, the universe, the solar system, the Sun and other stars, the evolution and properties of celestial bodies, and astronomical phenomena. This course includes three hours lecture and one and one-half hours laboratory time.

***SC107 ▸ METEOROLOGY +4**

This course introduces the nature, origin, processes, and dynamics of the Earth's atmospheric environment. Content will focus on: (1) weather systems and processes, (2) seasonal trends, (3) atmospheric circulation, pressure, and moisture, (4) storm development, (5) air pollution, and (6) anthropogenic influences on weather and climate. This course includes three hours lecture and one and one-half hours laboratory time.

***SC109 APPLIED PHYSICS3**

The applied physics course is designed to teach the basic concepts of physics, while applying them to practical situations and situations pertaining to wind energy and wind energy generation. Students will use a hands-on approach to study the concepts of force, work, rate, resistance and energy as related to mechanical, fluid, electrical, and thermal systems. Prerequisite: Intermediate Algebra with a C or better or appropriate ACT/Accuplacer scores.

***SC110 ▸ PRINCIPLES OF BIOLOGY I +5**

Is a combined lecture and laboratory course for students planning to choose biological sciences as major and take additional courses in biology. Covers contents of basic biochemistry, cell structure and function, molecular biology, and genetics, integrated in an evolutionary perspective. Meets three hours of lecture and three hours of laboratory per week. Equivalent to Biology I for Majors With Lab approved by Kansas Board of Regents for system-wide transfer.

SC111 ▸ MICROBIOLOGY LECTURE.....3

Is a study of microorganisms with emphasis on bacteria including fundamentals of their morphology, physiology, genetics and relationship to health and disease. (This is a three-hour lecture only class. No lab is included. Students wishing to take Microbiology Lab will also need to enroll in SC112.) Prerequisite: A college level biological science course with a C or better.

***SC112 ▸ MICROBIOLOGY LAB +2**

Is an extended weekly time period during which students are given the opportunity to demonstrate via specific laboratory procedures, principles of microbial structure, function, and the relationship of microbes to health and disease. This course includes three hours laboratory time. Prerequisite: Microbiology Lecture (SC111) or concurrent enrollment.

***SC115 ▸ GEOLOGY LAB +1**

This lab is intended as a hands-on approach to learning Earth materials and geological processes. Experiments will include: (1) using the scientific method and science tools to interpret geologic data, (2) examining the cause and effects of geologic hazards, (3) identifying rocks and minerals, (4) simulating stream and coastal processes, (5) assessing groundwater pollution, (6) analyzing geologic maps, and (7) interpreting the geologic history of the Great Plains. This course includes one and one-half hours laboratory time. Prerequisite: Previous credit in Geology lecture and approval from instructor

***SC116 METEOROLOGY LAB +1**

This lab is a hands-on study of atmospheric processes. Students will apply the scientific method to learn the reason for seasons and the causes of precipitation, weather hazards (tornadoes and hurricanes), atmospheric phenomena (mirages, halos, and rainbows), air pollution, and climate change. This course includes one and one-half hours laboratory time. Prerequisite: Previous credit in Meteorology lecture and approval from instructor.

***SC117 GENERAL BIOLOGY LAB +1**

This is a laboratory class that is an opportunity for an extended weekly time period during which students are given the opportunity to demonstrate via specific laboratory procedures, principles of scientific method, cellular biology, enzymatic functions, diversity, evolution, and ecology. This course includes one and one-half

Course Descriptions

hours laboratory time. Prerequisite: Previous credit in Biology lecture and approval from instructor.

***SC120 ▸ HUMAN ANATOMY & PHYSIOLOGY I +4**

Is an introduction to the basic concepts of biochemistry, cytology, histology, and cellular physiology that relate to all tissues, organs and organ systems of the human body. This will include the following organ systems: integumentary, skeletal, muscular, and neural. This course includes three hours of lecture and one and one-half hours of laboratory time.

***SC121 ▸ HUMAN ANATOMY & PHYSIOLOGY II +4**

Is a continuation of topics introduced in Human Anatomy and Physiology I as related to the following organ systems: cardiovascular, respiratory, gastrointestinal, excretory, endocrine, and reproductive. This course includes three hours of lecture and one and one-half hours of laboratory time. Prerequisite: Completion of or concurrent enrollment in Human Anatomy and Physiology I.

***SC125 HUMAN BODY DISSECTION +1**

Is designed to give the more advanced student an opportunity for hands-on dissection experience with a human cadaver. This course includes one and one-half hours of laboratory time. Prerequisite: Completion of or concurrent enrollment in Human Anatomy & Physiology I.

***SC126 ▸ ANATOMY AND PHYSIOLOGY +5**

Anatomy and Physiology is an introduction to the basic concepts of biochemistry, cytology, histology, and cellular physiology that relate to all tissues, organs and organ systems of the human body. It will include the following organ systems: integumentary, skeletal, muscular, neural, senses, endocrine, circulatory, respiratory, urinary, digestive, and reproductive. This course includes three hours of lecture and three hours of laboratory time.

SC128 PATHOPHYSIOLOGY4

Focuses on pathophysiologic concepts related to the functional and structural changes that accompany disease processes and the application of basic concepts to body systems and selected disease processes. Etiologies, signs, symptoms, courses, and complications of common diseases of the following organ systems are included: neurologic, endocrine, reproductive, hematologic, cardiovascular, lymphatic, pulmonary, renal and urologic, digestive, musculoskeletal, and integumentary. This course is a four hour lecture class. This course has no lab. Prerequisite: SC126 Anatomy and Physiology or SC120 Human Anatomy and Physiology I and SC121 Human Anatomy and Physiology II. Dual listed with NR128.

***SC130 ▸ GENERAL CHEMISTRY +5**

Is an introductory course that assumes no previous experience with chemistry. The course includes a basic overview of inorganic, organic and biochemistry. This course includes three hour

lecture and three hours laboratory time. Prerequisite: Elementary Algebra with a "C" or better or an appropriate ACT/Accuplacer math score.

***SC131 ▸ CHEMISTRY I +5**

Is an introductory course designed for engineering, allied health and science majors. Fundamental laws of chemistry, atomic theory and structure, chemical calculations, chemical bonding, gases and the kinetic molecular theory, chemical kinetics, acids, bases, and salts are covered in this course. This course includes three hours lecture and three hours laboratory time. Prerequisite: Intermediate Algebra with a "C" or better or appropriate ACT/Accuplacer scores.

***SC132 ▸ CHEMISTRY II +5**

This course will focus on the following topics: properties of solids and solutions, chemical kinetics, chemical equilibrium and applications, acids and bases, spontaneity, entropy, and free energy, thermochemistry, and an overview of organic and biochemistry. This course includes three hours lecture and three hours laboratory time. Prerequisite: Chemistry I with a C or better.

SC137 NATURAL HAZARDS AND DISASTERS3

This course will examine the physical mechanisms that create natural hazards and disasters, explore the geographic distribution of disasters around the globe, and address how humans mitigate against and respond to them. Topics to be covered include tornadoes, earthquakes, tsunamis, volcanoes, floods, hurricanes, heat waves, and droughts, as well as some lesser-known and larger scale phenomena such as the El Nino/La Nina cycle, meteorite impacts, and global climate change. This course includes three hours lecture. This course has no lab. Students wishing to take Natural Hazards and Disasters Lab must enroll in SC138.

***SC138 NATURAL HAZARDS AND DISASTERS LAB +1**

This lab will examine the physical mechanisms that create natural hazards and disasters, explore the geographic distribution of disasters around the globe, and address how humans mitigate against and respond to them. Topics to be covered include tornadoes, earthquakes, tsunamis, volcanoes, floods, hurricanes, heat waves, and droughts, as well as some lesser-known and larger scale phenomena such as El Nino/La Nina cycle, meteorite impacts, and global climate change. This course includes one and one-half hour lab time. Prerequisite: Previous or concurrent enrollment in SC137.

***SC140 ▸ COLLEGE PHYSICS I +5**

Is an introductory course covering the general topics of mechanics, static, and dynamic forces, energy, momentum and simple harmonic motion. Depending on the time and level of class preparation other material may be covered during the first semester, particularly heat and thermodynamics. College Physics I is recommended for majors in science and allied health. This course includes three hours lecture and three hours laboratory time.

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Prerequisite: College Algebra and College Trigonometry with a “C” or better or appropriate ACT/Accuplacer scores.

***SC141 ▸ COLLEGE PHYSICS II +5**
Is the second half of introductory physics covering the general topics of heat, sound, electricity, light, and modern physics. College Physics II is recommended for majors in science and allied health. This course includes three hours lecture and three hours laboratory time. Prerequisite: College Physics I with a C or better.

***SC142 ▸ UNIVERSITY PHYSICS I +5**
Is an introductory course covering the general topics of mechanics and heat and is recommended for majors in science and engineering. Extended laboratory are required as this course combines three hours of lecture and three hours of laboratory time. Co-requisite: Analytic Geometry and Calculus I.

***SC143 ▸ UNIVERSITY PHYSICS II +5**
Is the second half of introductory physics covering the general topics of sound, electricity, light, and modern physics. University Physics II is recommended for majors in science and engineering. This course includes three hours lecture and three hours laboratory time. Prerequisite: University Physics I with a “C” or better.

***SC151 ▸ PRINCIPLES OF BIOLOGY II +5**
A combined lecture and laboratory course for students planning to choose majors of biological sciences and take additional courses in biology. Covers contents of basic plant and animal morphology and physiology, biodiversity and phylogeny, population genetics, and principles of evolution and ecology. Meets three hours of lecture and three hours of laboratory per week. Equivalent to Biology II for Majors with Lab approved by Kansas Board of Regents for system-wide transfer.

SC220 COOPERATIVE EDUCATION INTERNSHIP 1-6
See CA220.

* A lab fee will be assessed for these courses.
+ These courses are considered lab courses.

STUDENT DEVELOPMENT

SD099 PERSONAL ASSESSMENT AND PLANNING1
Allows students to assess their skills, aptitudes, interests, and values. It helps students: 1) determine what obstacles are interfering with their learning, 2) devise a plan to overcome these obstacles, and 3) gain the self-confidence and self-determination necessary for college success. All students with academic probation status are required to enroll in this course. Students may not drop or withdraw from this course without prior approval from the Vice-President of Academic Affairs.

SD100 COLLEGE SKILLS AND RESOURCES1
Familiarizes incoming Cloud students with the campus, its facilities, procedures and regulations. Students are assisted in 1) defining their educational goals, 2) identifying courses and experiences that can help fulfill their goals and 3) accessing the support services necessary to achieve their goals. Required for first-time college students enrolled in nine or more credit hours.

SOCIAL SCIENCE

SS101 ▸ GENERAL PSYCHOLOGY3
General Psychology is an introductory course covering a survey of methods, facts, and principles relating to basic psychological processes. Major topic areas include neural bases of behavior, learning and motivation, psychosocial development and psychological disorders, human cognition, cognitive development, and individual differences and social psychology.

SS102 ABNORMAL PSYCHOLOGY3
This class examines psychological disorders in the current Diagnostic and Statistical Manual of Mental Disorders. Other types to be studied are neurocognitive disorders, substance-related and addictive disorders, neurodevelopmental and disruptive disorders, and eating, sleep and elimination disorders. Study of major theoretical models explaining psychological disorders, and discussions of major psychological and psychiatric models for treating and modifying abnormal behavior will be a part of the course.

SS103 SOCIAL PSYCHOLOGY3
Is an introduction to the discipline that utilizes the scientific method to attempt to understand and explain how the individual's behavior, thoughts, and feelings are influenced by the actual, imagined or implied presence of others. Analysis of the self, culture and gender will be given special emphasis in regard to their direct and indirect influence upon human behavior.

SS105 ▸ HUMAN GROWTH AND DEVELOPMENT3
The class is a study of the self and steps which lead to psychological maturity. The class will include an analysis of our culture in relationship to the needs for personal growth and will study the individual from conception through death. The course will cover physical, mental, and cultural needs for a rich and satisfying life.

SS106 ▸ MARRIAGE AND FAMILY3
Is a study of mate selection, marriage, and the family from the psychological, sociological, biological, and developmental points of view. Included are the relationship of values to marriage, sex roles, dating and engagement, family planning, parenthood, family economics, communication and marital growth and fulfillment, and death in the family.

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SS107 HUMAN SEXUALITY3

Human Sexuality is an introductory course focusing on the biological, cultural, psychological, social, and legal aspects of human sexuality. Discussions of sexual attitudes, ideals, and behaviors of the past and present, as well as similarities and differences in the United States and other parts of the world regarding sexual issues will be covered.

SS113 HUMAN RELATIONS3

Is an experience-oriented class which is designed to assist persons to focus upon themselves and others. Utilizing group interaction and discussion, emphasis is placed upon the development of listening and communication skills, conflict management, personal and interpersonal awareness, goal setting, and effective time management.

SS125 ▸ INTRODUCTION TO CULTURAL ANTHROPOLOGY3

Is designed to introduce students to the extraordinary diversity of human cultures. This variation is viewed as a reflection of each society's continuing need to adapt successfully to local, social and environmental conditions. While the course focuses chiefly upon primitive and nonindustrialized societies today (i.e., those living in the "ethnographic present"), past cultures are also surveyed from the perspectives of physical anthropology and archaeology.

SS127 ▸ CHILD PSYCHOLOGY.....3

Child psychology is designed to cover the developmental aspects of physical, neurological, cognitive, psychosocial and personality development of the child from conception through adolescence. Research methods and genetic, behavioral and environmental theory will be included. This course will explore current impacts on behavior and development.

SS129 ▸ INTRODUCTION TO SOCIAL WORK3

This course aims to assist students gain knowledge about the nature of social work practice including its values, ethics, roles and activities; understand some of the differences between conventional and progressive approaches to social work; understand more about themselves in regard to social work; and gain familiarity with the work done by social workers in the community and the world.

SS130 ▸ INTRODUCTION TO SOCIOLOGY.....3

Is designed as an introduction to the study of the structure and function of human groups, particularly those which occur in contemporary industrialized cultures. The relationships between the individual and his society, culture and society, and the social dynamics of institutions are investigated.

SS131 ▸ CULTURAL DIVERSITY AND ETHNICITY3

This course seeks to expose students to historical and contemporary issues related to diversity, race, and ethnicity in the United

States. The course will utilize different sociological perspectives to critically analyze racial and ethnic relations. The course will highlight concepts such as power, oppression, stereotypes, inequality, prejudice, and social stratification. The course examines social policy as it relates to race and ethnicity and analyzes the ways in which racial and ethnic relations are a social, structural, and systemic problem rather than an individual problem. The class will highlight social reform, social justice and cultural change and the many ways in which each of us can be a change agent.

SS140 ▸ U.S. GOVERNMENT: NATIONAL3

Is an introduction to the structure and function of the United States Government and the political behavior of the American people.

SS141 ▸ U.S. GOVERNMENT: STATE AND LOCAL3

Is a study of the structure and function of state and local governments with special attention given to the governments in Kansas.

SS142 CURRENT POLITICAL ISSUES.....3

An introduction to contemporary political issues and the problems that concern American society. This course will look at current events that are shaping current political policy at the local, state and national levels.

SS150 ▸ INTRODUCTION TO INTERNATIONAL RELATIONS3

This course focuses on concepts and patterns of political behavior within societies, and the reasons behind these patterns. The aim of this course is to furnish students with the intellectual tools to understand the future, as well as current events in their society and around the globe.

SS201 ▸ SOCIAL PROBLEMS.....3

This course involves the application of sociological concepts and principles to the description and critical analysis of major social problems of modern societies. A founding assumption to this course is that it is crucial for people to be able to subject their own society to scrutiny in order to arrive at intelligent assessments of particular social problems. It is equally important that people understand the general patterns of societal development that often cause or aggravate these problems. Within this framework, this course will examine various problems including those of wealth and poverty, class stratification, race and ethnicity, crime and deviance, gender, and problems of our consumer society.

SS220 COOPERATIVE EDUCATION INTERNSHIP 1-6
See CA220.

SOLAR ENERGY

***SE100 INTRODUCTION TO SOLAR ENERGY3**

Introduction to Solar Energy students will be exposed to many facets of the solar industry. This course will cover basic principles of

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solar energy conversion. The solar industry worldwide is growing every year and the cost of the energy has been declining because of the efficiency of new technologies. Class topics will not only cover the mechanical, technical, and electrical aspects of solar energy but also environmental, social, political and economic aspects of solar energy.

***SE101 SOLAR ENERGY FUNDAMENTALS.....3**

Solar Energy Fundamentals will cover the solar industry, composition of PV systems, basic terminology for the industry, importance of the sun's insolation, and the effects of solar shading. The course will also examine the specifics of a panel at the component level and the importance of panel selection.

***SE102 SOLAR ENERGY DESIGN3**

Solar Energy Design students will learn real world knowledge, experience, and understanding of solar photovoltaic and solar power systems. This course will cover designing, estimation, bidding, submitting, permitting, building, and passing inspections of PV systems.

***SE103 SOLAR ENERGY OPERATIONS & MAINTENANCE.....3**

Solar Energy Operations and Maintenance course will cover analyzing results of test tools used during commissioning, performance evaluations, operations, maintenance, and troubleshooting. Tools include insulation resistance testing, IV curve tracing, infrared cameras, and thermal imaging. Students will learn the proper set-up, use, and function of the tools and the proper ways to evaluate the system. The course will also include the proper ways to troubleshoot and locate common faults of PV systems using tools and methods.

***SE201 ADVANCED SOLAR ENERGY DESIGN3**

Solar Energy Advanced System students will be exposed to the specific techniques in design of a solar project. This course will cover customer expectations and characteristics specific to a site. Class topics will also cover the mechanical, technical, and electrical design requirements of solar PV systems.

***SE202 ADVANCED SOLAR ENERGY INSTALLATION3**

Solar Energy Advanced Installation will cover all aspects of the installation of a solar PV project. The course will explore the safety requirements of the solar industry and hazards associated. It will also cover the proper regulations and methods required by the NEC and other governing bodies.

***SE203 SOLAR ENERGY SYSTEM COMMISSIONING.....3**

Solar Energy System Commissioning students will learn the proper procedures in commissioning of a solar PV system. This course will cover equipment use, proper inspection, conducting proper tests, and verification of proper system operation.

***SE204 SOLAR ADVANCED OPERATIONS & MAINTENANCE.....3**

Solar Energy Advanced Operations and Maintenance course will learn methods for verifying system operation and performance in order to diagnose and correct problems. Students will perform preventative maintenance on PV systems in real life situations and determine corrective actions to take.

*** A lab fee will be assessed for these courses.**

UNMANNED AIRCRAFT SYSTEMS

***UA100 INTRODUCTION TO SUAS.....3**

This course is an introduction to Unmanned Aerial Systems. It will cover the safety requirements to operate in the National Air Space in the United States. It will also evaluate the role of the FAA and local laws which govern the operation of UAV's. Other organizations which work to keep citizens and operators safe and efficient in their operation of UAV's will also be introduced. Through the course, the different types of drones and applications in today's world will be explored.

***UA110 SUAS GROUND SCHOOL3**

The sUAS Ground School Course sets a sturdy foundation of required aeronautical knowledge for remote pilots of UAS less than 55 pounds. The curriculum addresses all pertinent aeronautical knowledge factors outlined by the FAA for the Unmanned Aircraft General (UAG) examination and augments those with safety concepts and practices to develop well-informed and responsible remote pilots. Students who successfully complete the course receive a certificate of completion from ARGUS Unmanned and are well prepared to pass the UAG exam.

***UA140 SUAS APPLICATIONS3**

Unmanned Applications course objectives is to provide an understanding of how unmanned aircraft are used to accomplish a variety of tasks in a complex environment and how remote pilots apply UAS technology for commercial, scientific, and governmental purposes while respecting both the physical and regulatory limitations. Additionally, this course creates a foundation for the concept of professionalism and ethics as they apply to remote pilots.

***UA150 SUAS PERSONNEL, SAFETY, & CREW RESOURCE MANAGEMENT3**

sUAS sUAS Personnel, Safety, and Crew Resource Management course objective is to provide the basic knowledge needed to integrate drones into the National Airspace and to develop a workflow for UAV missions. The importance of safety and mitigating risk is of paramount importance for UAV's to be considered a viable means of collecting data in the National Airspace. This course is not intended to be a management of personnel but a framework to develop safe, efficient, workflow for all UAV missions.

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***UA201 SUAS COMMAND, CONTROL, & COMMUNICATIONS.....3**

Command, Control, and Communications will be covered as it relates to the team operation of a UAS. Students will learn the various types of systems and controls required to operate a UAV in the National Air Space. They will learn the devices needed and the reliability of the differing technologies for safe and effective flight. Both hardware components and software control solutions will be covered.

***UA210 SUAS SYSTEMS AND CONCEPTUAL DESIGN3**

This course will introduce the components required for remote controlled flight by a multi-rotor vehicle. Within the course the structural pieces of the UAV will be constructed by 3D printer techniques and all components which cannot be printed will be added to the design with a finished flying UAV by the end of the course. Through this process students will learn the various laws of physics and construction and repair techniques to create an air-worthy multi-copter.

* A lab fee will be assessed for these courses.

WIND ENERGY

***WE100 INTRODUCTION TO WIND ENERGY.....3**

Students will be exposed to the many facets of the wind industry. This course will cover basic principles of wind energy conversion. The wind industry world wide is growing faster than any other energy source. Class topics will not only cover the mechanical, technical, and electrical aspects of wind energy but also environmental, social, political and economic aspects of wind energy.

***WE105 EMPLOYABILITY SKILLS, SAFETY, BLUEPRINT READING.....3**

A course designed specifically for the wind energy students. Each of the course's topics will be presented for approximately a third of the semester. Employability Skills will provide the student with lifelong career planning skills and employability skills necessary to secure a career in the wind industry. Safety will cover the necessary topics of OSHA safety training in the electrical industry. Blueprint Reading will provide the student with communication skills in the areas of reading blueprints for development, construction, operation, maintenance, and electrical power systems.

***WE110 ELECTRICAL THEORY3**

Students will be exposed to many facets of electrical energy. This course will cover basic electrical circuit information such as voltage, current, resistance, series circuits, parallel circuits, combination circuits, conductors, insulators, electrical power, sources of electrical energy, magnetism, meters, AC/DC current, and other topics that are appropriate.

***WE120 HYDRAULICS.....3**

Hydraulics is a study dealing with the mechanical properties of liquids. Hydraulic topics cover concepts such as hydraulic pumps, actuators, accumulators, cylinders, control valves, check valves, flow control valves, directional control valves, pressure control valves, motors, filters, coolers, and reservoirs.

***WE150 MECHANICAL SYSTEMS3**

Mechanical Systems will expose the wind energy students to the installation, use, maintenance, and troubleshooting of mechanical drive components. This course will cover basic principles of wind energy mechanical systems with practical hands-on tasks which will be encountered in the wind industry.

***WE202 ELECTRICAL POWER DELIVERY3**

This course will cover the entire scope of electric power delivery from generation to transmission and distribution to electrical loads. Students will learn about the generation systems that convert resources into electrical power. Underground and overhead transmission cables, distribution lines, and substations will be studied. The students will also learn about the interconnection of electrical energy into the electrical grid, and how it is distributed throughout the grid to electrical loads. General transformer function and operation will be discussed, as well as protective relaying and circuit breaker types. A combination of site visits to operating generation plants, substations, and electric utility companies will reinforce the classroom material.

***WE210 ELECTRONICS3**

The study of the flow of charge through various electrical devices and the transmission of power and information. This course will cover principles of the electronics fields which will be necessary to understand how electronic components are used to make complex electrical systems. These electrical systems are the backbone of the electrical energy industry. Prerequisite: Electrical Theory with a C or better.

***WE215 ELECTRICAL SYSTEM PROTECTION AND COORDINATION.....3**

Students will learn how circuit breakers and fuses are employed to ensure optimal system protection from system faults and overload conditions. Proper installation and operation of switching mechanisms, fuses, and single-phase and three-phase circuit breakers and reclosers will be covered through lecture and hands-on experience. Protective relaying, sectionalizing, and remote monitoring and control through SCADA systems will also be covered.

WE220 COOPERATIVE EDUCATION INTERNSHIP 1-6 See CA220.

***WE225 MOTORS, GENERATORS, PLCS3**

Provides students with the basic understanding of the principles of motors, generators, motor controls, and programmable logic

Course Descriptions

controllers (PLCs). Both electromechanical and solid state electronic control devices are covered in this course.

***WE227 PLCs (PROGRAMMABLE LOGIC CONTROLLERS)3**

The PLC course will provide a broad-based understanding of important PLC principals and concepts. You will understand how to connect to PLC hardware, create ladder logic programs, explore applications of PLC controls, and see how they function in various control systems. You will also study various programming conventions, as well as practical issues about automation controls and components.

***WE230 SUBSTATION & VOLTAGE REGULATION.....3**

A study of substations, capacitors, voltage regulators, boost and buck boosters; practical experience in substation grounding, inspections, substation maintenance; operation and installation of high side fuses, power transformers, substation buswork, and transfer switches; methods of voltage regulation, and Supervisory Control and Data Acquisition (SCADA).

***WE240 GIS/GPS.....3**

The GIS/GPS course is designed to provide a basic working knowledge of Geographical Information Systems and Global Positioning Systems as they relate to the operation of small UAVs. Upon completion of this course, the student will understand the timeline of development for GIS, GPS, and UAVs. The student will be able to demonstrate necessary software configuration, operation and maintenance of a UAV for purposes of aerial imaging. The course will be taught with the intent of expanding one's ability to complete inspection of wind turbine blades, power lines and substations, agricultural surveys and the integration of sports and event photography.

***WE250 DATA ACQUISITION AND COMMUNICATIONS ..3**

This course will give students information on how resource data is collected and analyzed for the use in the generation of electricity. Analog-to-digital data conversion will be studied, as well as instrument calibration. Students will also learn how data is communicated to assess power production of generation systems. The function of Supervisory Control and Data Acquisition (SCADA) systems will be discussed in detail.

***WE255 AIRFOILS AND COMPOSITE REPAIR.....3**

Students will be exposed to many facets of composites to build concrete foundations and blades on a wind turbine. This course will cover basic principles of the wind turbine blade design, blade composition, and base construction. The airfoils portion of this class will cover the aero-dynamic basics of the wind turbine blades using the wind to convert one form of energy to another. Composite materials will be studied as they are used in the manufacturing processes of wind turbine components.

***WE257 APPLIED AIRFOILS3**

Applied Airfoil students will be exposed to many facets of wind turbine blades from the wind turbine industry. Reliability of wind

turbines is directly related to the quality and service of the rotor and blades. Documentation of defects from manufacturing as well as current stress is vital to determining blade length of service and projected maintenance schedules. This course will cover fundamental principles of mold construction, blade construction, quality control, inspection, and materials used for wind turbine blades.

***WE262 BLADE REPAIR OPERATIONS.....4**

Blade Repair Operations will introduce the students to industry standards of safety, operation, and maintenance of wind turbines and project operations. Students will be trained on the proper techniques and safety to gain access to the blades of a wind turbine for inspection and repair procedures. Specific training on suspended access equipment will allow student to safely inspect/repair wind turbine blades. Safety is at the heart of everything we do in this training program. Students will also understand the concept of day to day operations of a blade repair technician. Students will become familiar with the tools and equipment used and learn the value of teamwork as it applies to operations and repair of wind turbine blades. Students must have a physical on file to enroll in this class.

***WE265 FIELD TRAINING & PROJECT OPERATIONS.....5**

This course will introduce students to industry standards of safety, operation and maintenance of wind turbines and project operations. Students will also benefit from field trips to operational projects to gain perspective of day to day operations of a wind turbine generation facility. Students must have a physical on file to enroll in this class.

***WE270 TRANSFORMER THEORY.....3**

A transformer is a device used to transform (change) electrical power from one circuit to another. This course will cover the basics of magnetism, induction, windings, turns ratios, step-up transformers, step-down transformers, efficiencies, power transmission, single-phase power, three-phase power, delta windings, wye windings, and other transformer topics.

***WE280 WIND ENERGY TECHNOLOGY INTERNSHIP.....4**

The CCCC WET Internship program allows students to gain real world experiences with a wind energy or electrical related industrial company. Internships provide a bridge between classroom learning and full-time employment. Students work as a team with other competent employees who help guide the students to develop job skill sets necessary for employment in the area of electrical generation and distribution. An internship enables students to experience valuable work experience to help make future career choices.

*** A lab fee will be assessed for these courses.**

‡ The courses noted with this symbol qualify for guaranteed transfer. Visit www.kansasregents.org/transfer_articulation for more information.

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