

2019-2020



CLOUD COUNTY CATALOG



Degree & certificate requirements | Student information, services, & policies | Program & course descriptions

CLOUD COUNTY COMMUNITY COLLEGE

Concordia • Geary County • Online & Outreach

www.cloud.edu • 800.729.5101



CLOUD 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 2019-2020



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 2019-2020 catalog are true and correct to the best of our knowledge.

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Dr. Todd Leif Science, Mathematics & Technical Programs

Academic Calendar • 2019-2020

FALL SEMESTER, 2019

Aug 7	Adjunct Faculty In-Service - GCC
Aug 8	Outreach Instructor In-Service - Concordia
Aug 12-16	Faculty Contract Days
Aug 12	Convocation
Aug 15	Student Services Day - GCC
Aug 18	Move-In Day - Concordia
Aug 19-20	Faculty Contract Days
Aug 19	Move-In Day (am) - Concordia
	New Student Orientation (pm) - Concordia
Aug 20	New Student Orientation (am) - Concordia
	Student Services Day (pm) - Concordia
	New Student Orientation - GCC
Aug 21	Classes begin - All campuses (Full Session & First Session)
Sep 2	Labor Day - COLLEGE CLOSED - No classes (all locations)
Oct 7-10	Mid-Term Exams for Full Session Classes
Oct 8-9	Final Exams - 1st Session
Oct 14	2nd Session Begins
Oct 17-18	Faculty Contract Days - NO CLASSES
Oct 17	In-Service - No Classes (All locations)
Nov 11	Veterans Day - COLLEGE CLOSED - No classes (all locations)
Nov 27-29	Thanksgiving Break - COLLEGE CLOSED - No classes (all locations)
Dec 9-12	Final Exams for Full & 2nd Session Classes
Dec 13	Faculty Contract Day
Dec 23-Jan 1	Winter Break - COLLEGE CLOSED - No Classes (all locations)

INTERTERM, 2019-2020

Dec 16	Winter Term Begins
Jan 17	Winter Term Ends

SPRING SEMESTER, 2020

Jan 9	Adjunct Faculty In-Service - GCC
Jan 13-17	Faculty Contract Days
Jan 13	Convocation
Jan 16	Student Services Day - GCC
Jan 20	Martin Luther King Jr. Day - COLLEGE CLOSED
Jan 21	New Student Orientation - Concordia & GCC/Student Services Day (pm) - Concordia/ Faculty Contract Day
Jan 22	Classes begin - All Locations (Full Session & First Session)
Feb 17	President's Day - COLLEGE CLOSED - No classes (all locations)
Mar 6	In-Service - All Staff - No Classes (all locations)
Mar 11-15	Spring Break - COLLEGE CLOSED No classes (all locations)
Mar 16-19	Mid-Terms - Full Session
Mar 17-18	Final Exams - 1st Session
Mar 23	Second Session Begins
Apr 10	Good Friday - COLLEGE CLOSED - No classes (all locations)
May 11-14	Final Exams (Full & 2nd Session Classes)
May 15	Commencement - 7 p.m. at Concordia for all graduates
May 18	Faculty Contract Day
May 25	Memorial Day - COLLEGE CLOSED - Concordia & GCC

Academic Calendar • 2019-2020

SUMMER SESSION, 2020 (Classes held Monday-Thursday)

May 29	College Closed (4-day work-week begins)
Jun 1	Summer School begins - (Full & 1st Session)
Jun 25	Last Day for 1st Session
Jul 2	Independence Day Observed- COLLEGE CLOSED - No classes (all locations)
Jul 6	2nd Session Summer Begins
Jul 30	Last Day for Summer School - (Full & 2nd Session)
Jul 31	College Closed (4-day work-week ends)

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



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 15 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 Cloud Power Wind Farm was finished and commissioned in April 2010. The wind farm has two Northwind 100 wind turbines. Combined, and at peak performance, the turbines can generate 350 kilowatts of electricity. The wind farm also provides an on-site laboratory for students enrolled in the Wind Energy Technology program.

Shortly after the turbines were commissioned, 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. The system is completely powered by the wind farm on an average day, which offsets the college's electricity and natural gas costs. When combined, the college will save 1,656 barrels of oil per year, or enough electricity to power 60 homes.

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.

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"

General Information

NOTICE OF NONDISCRIMINATION

Cloud County Community College does not discriminate on the basis of race, religion, color, national origin, sex, age, disability, or ancestry in admission to, access to, treatment of, or employment in, its programs and activities. 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.

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 <http://www.cloud.edu/Assets/PDFs/about/Board-of-Trustees/E5%20Student%20Privacy%20Rights.pdf>.

BOOKSTORE

Striving for superior customer service, the T-Bird Bookstore caters to all of your classroom and apparel needs. They offer textbooks, classroom, and laboratory supplies, and supplemental reading materials. 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/index>.

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	\$10
Ag Program Fee	\$25 per cr/hr
Ag Judging Lab Fee	\$200
Audit Fee.....	Same as Tuition
Bowling Fee.....	\$50
Calculator Rental.....	\$100 or \$140
First Aid & Safety Fee.....	\$15
Graduation Fee	\$30
*Internet Course Processing Fee	\$25 per credit hour
**Lab Fee	\$5 per credit hour
**Nursing Fees - Traditional Track (total for program)	\$2551
LPN to ADN Track (total for program).....	\$1917
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
Renewable Energy Lab Fee	\$15 per credit hour
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 <http://www.cloud.edu/Assets/PDFs/about/Board-of-Trustees/F6%20Tuition%20and%20Fees%20procedures.pdf> for 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/index>

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

Financial Aid: <http://www.cloud.edu/Students/financialaid/index>

Scholarships: <http://www.cloud.edu/Admissions/Covering-the-Cost/index>

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

Advising: <http://www.cloud.edu/Academics/Advising/index>

Enrollment Guide: <http://www.cloud.edu/Assets/PDFs/online/iCloud%20Enrollment%20Guide.pdf>

Online: <http://www.cloud.edu/Academics/Online/index>

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

TRiO: <http://www.cloud.edu/Academics/TRiO/index>

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

Career Center: <http://www.cloud.edu/About/Career-Center/index>

Children's Center: <http://www.cloud.edu/About/Children-Center/index>

Campus Security: <http://www.cloud.edu/Students/Safety/index>

Veteran Services: <http://www.cloud.edu/Students/VeteranServices/index>

Adult Education: <http://www.cloud.edu/Academics/Adult-education-program/index>

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
- Tutor Training
- Relaxed and Quiet Study Environment
- Professional and Caring Staff

Distance Tutoring

The Student Success Center also offer online tutoring which is provided through a Zoom link. Students can request assistance between the hours of 9:00 am to 11:00 am and 1:00 pm to 3:00 pm. However, students are advised to make an appointment by calling 1-800-729-5101, ext 231 or by emailing ssc@cloud.edu to ensure assistance availability.

To connect to Zoom through Canvas, click on the Online Tutoring side tab on any class menu and then click on the link provided.

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.

For more information regarding the Student Success Center, see <http://www.cloud.edu/Academics/Student%20Success%20Center>.

LIBRARY

The Cloud County Community College Library supports and enhances the College's instructional programs by providing services and resources to the college community and the general public in order to promote information literacy, ie., the ability to locate, evaluate, and use information.

For more information and to see what resources are available, go to <http://www.cloud.edu/Academics/Library/index>.

ACCOMMODATION FOR DISABILITY

Academic: If academic accommodation is needed for any type of disability, students should contact the Director of Advisement and Retention Services, located in the Advisement Center 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.

Other than Academic: If special arrangements are needed for accessibility, contact the Vice President for Administrative 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 in the Advisement Center on the Concordia Campus or the Student Services Office on the Geary Co. Campus.

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 24 semester credit hours in general education and not less than 36 semester credit hours in a program of college-level work are required. Students can earn a General Studies Degree in a field of study 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 30 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 30 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:

- Proven English Grammatical Proficiency
- 3 credit hours Communications (Oral)
- 3 credit hours Mathematics General Education Courses, Intermediate Algebra, or Survey of 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 15 credit hours

Specialized and Related Competencies - Minimum of 47 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 expands 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 Christian Ethics in Our Contemporary Society.....	3 credit hours
RE104 World Religion.....	3 credit hours

Theatre

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

Mathematics General Education Courses

MA105 Survey of Math (Certs & AAS Degrees only).....	3 credit hours
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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 Linear Algebra/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

Physical Science

AG108 Environmental Quality.....	3 credit hours
AG109 Environmental Quality Lab.....	1 credit hour
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
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 <http://www.cloud.edu/About/Board-of-Trustees/policies/index>

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/transferability/index> 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/index>

Additional transfer and program articulation can be found in Policy D23 at <http://www.cloud.edu/About/Board-of-Trustees/policies/index>.

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 grade earned. 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 <http://www.cloud.edu/About/Board-of-Trustees/policies/index>.

STUDENT CLASSIFICATION

1. Freshman: Any student having fewer than 30 semester hours credit.
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 Freshman 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.

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

Academic Regulations

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. 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 at <http://www.cloud.edu/Assets/PDFs/about/Board-of-Trustees/D5%20Procedures.pdf>.

Placement Test

Students who have not completed college-level math or English must provide ACT, SAT, Compass, or Accuplacer placement test scores prior to enrollment. 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 a placement test and will incur a test fee that will be due at the time of testing. There is a 2-month waiting period for retake tests. The same fee applies to retake tests.

Scores from the test will be used to determine the appropriate math, English or reading 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, will 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 service area, who are enrolling in concurrent courses through CCCC, are given the 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 Cloud may take the placement test at the Concordia or Geary County campuses throughout the year. Students wishing to schedule a time to 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 test sites. Students can also make arrangements to test at a test site closer to the student. Students studying at other institutions can call the Advisement Center at 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 <http://www.cloud.edu/Assets/PDFs/about/Board-of-Trustees/D5%20Procedures.pdf>.

Withdrawal

Students may withdraw from classes according to guidelines in Policy D5 at <http://www.cloud.edu/Assets/PDFs/about/Board-of-Trustees/D5%20Procedures.pdf>. A “W” (withdrawn) will appear on the transcript for these courses. Forms for this purpose are available from the Concordia Campus Advisement Center and the Geary County Campus Office of Student Services.

Before a withdrawal can be finalized the instructor must be informed.

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

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.

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

Academic Regulations

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.

Satisfactory Academic Progress Chart

<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

Students on probation or suspension from another college or university will enter Cloud County Community College on probation.

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 <http://www.cloud.edu/Assets/PDFs/about/Board-of-Trustees/D14%20Academic%20Probation%20and%20Suspension.pdf>

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.

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.

Academic Regulations

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, WE as well as CDL and Agri-Biotechnology 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 petition by December 1. Students completing requirements during the spring or summer semester must submit a petition by March 1 to participate in the commencement ceremony.
- No more than 12 hours of PE activity course credits can be used towards 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 adopts the following procedure for addressing any complaint or dispute related to academic matters. Students who wish to appeal any academic dispute arising from an academic endeavor must follow this procedure. Failure to comply with these procedures shall be grounds for dismissal of any complaint or dispute and dismissal of the complaint shall be final. The complete Academic Due Process policy and procedure may be obtained from the Office of the Vice-President for Academic Affairs or at <http://www.cloud.edu/Assets/PDFs/about/Board-of-Trustees/D19%20Academic%20Due%20Process.pdf>. After obtaining a copy of the policy from the Academic Affairs Office, students who wish to appeal any academic dispute arising from an academic endeavor must start the process by:

Step 1: The student shall, within 10 business days following the academic dispute (i.e. issuance of the grade, charge of academic dishonesty, questioning classroom policy, procedures, assignments, or any related areas) provide written notification of any objection or complaint to the instructor and personally confer with the instructor (face-to-face or through web conferencing) to discuss resolution of the matter. Both student and instructor shall make a good faith effort in settling any dispute at this level. The instructor shall, within five (5) business days following the conference with the student, provide the student in writing the decision regarding the academic dispute.

Step 2: If the student is not satisfied with the results of the conference, the student must submit the Academic Due Process Complaint Form (found at the end of the procedures at <http://www.cloud.edu/Assets/PDFs/about/Board-of-Trustees/D19%20Academic%20Due%20Process.pdf>) to the appropriate Division Dean, his/her designate, within five (5) business days following completion of Step 1. The Division Deans will document evidence and log the complaint according to institutional practice.

The Division Dean, or his/her designate, may request a meeting with the student (face-to-face or through web conferencing) for the purposes of seeking a resolution to the dispute. All parties must make a good faith effort at resolution, and no complaint or dispute may proceed to the next step unless such attempt at resolution is made.

The Division Dean, or his/her designate, shall evaluate the complaint or dispute to ensure that it meets the standards set forth in this policy and prepare a formal letter with his or her decision within five (5) business days, addressed to the student and to the faculty member identifying the resolution of the complaint.

If the student is not satisfied with the resolution presented by the Division Dean, the student will initiate Step 3.

Step 3: The student shall supply a copy of the Academic Due Process Complaint Form, along with all attachments or supporting material, to the Vice-President for Academic Affairs or his/her designate, within five (5) working days of the completion of Step 2.

The student shall make themselves available to the Vice-President for Academic Affairs, or his/her designate, for informal

Academic Regulations

discussions on the topic of resolution of the complaint or dispute.

Should the Vice-President for Academic Affairs, or his/her designate, deem it appropriate, a formal hearing on the complaint or dispute may be set within five (5) business days. Such hearing shall be held before an ad hoc committee composed of the Division Dean, two faculty members from the Division, the Vice-President for Academic Affairs, and one faculty member from another division, and one faculty/staff member representative on behalf of the student. The members of the committee shall be appointed by the Vice-President for Academic Affairs. Said committee shall serve in an advisory role only, and shall report directly to the Vice-President for Academic Affairs, or his/her designate.

The Vice-President for Academic Affairs retains the discretionary authority to take action on the complaint or dispute based on the written reports submitted.

Step 4: Should the matter not be resolved, the student must submit a copy of the complaint or dispute, along with all attachments or supporting material, to the Office of the President within five (5) business days of completion of Step 3. The student must also submit a written notice of appeal from the decision of the Vice-President for Academic Affairs, and such notice must contain a concise statement of all issues remaining in dispute. The President retains discretionary authority to take action on the complaint or dispute based on the written reports submitted. The President may also take other action as deemed necessary.

Step 5: Use of the complaint procedure is not a prerequisite to the pursuit of other remedies. In addition to utilizing the college's complaint process, the following outlets exist for seeking redress of grievances:

- Complaints regarding State Authorization Reciprocity Agreement (SARA) courses delivered by SARA member community colleges may be filed by students enrolled in these courses with the Kansas Board of Regents office.
- Kansas Community Colleges are regionally accredited by the Higher Learning Commission on Colleges and Universities (HLC). Complaints regarding an institution's ongoing ability to meet the Criteria of Accreditation may be filed by following the guidelines at <https://www.hlcommission.org/HLC-Institutions/complaints.html>.

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. A form must be completed and signed prior to leaving campus by both the student and their instructors providing an understanding of the estimated time a student will be gone from campus, when the student expects to return to campus, and the course expectations during the leave of absence. The Leave of Absence form does not serve as a contract, but rather a tool for communication between the student and their instructors. 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.



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.

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/transferability/index> 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/index>

Additional transfer and program articulation can be found in Policy D23 at <http://www.cloud.edu/Assets/PDFs/about/Board-of-Trustees/D23%20Course%20Transfer%20and%20Program%20Articulation%20procedures.pdf>.

Fields of Study

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 the career programs. For information about courses in the career program offered online visit <http://www.cloud.edu/Academics/Online/index>.

Agri-Biotechnology	Communications	Nursing & Allied Health
Agricultural Production & Services	Journalism-Mass Communications	Technical Studies
Precision Agriculture	Visual Communications	Solar Energy
General Business	Emergency Medical Technician (Certificate)	Unmanned Aircraft Systems
	Wind Energy Technology	

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/index>.

Agriculture	Business	Communications
Education	Health and Human Performance	Humanities and Fine Arts
Interdisciplinary Studies	Mathematics and Engineering	Pre-Professional Health
Renewable Energy	Science	Social Science

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/index>. For information about courses in the transfer program offered online visit <http://www.cloud.edu/Academics/Online/index>.

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

Focus Areas:

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

AGRICULTURE

Department Chair: Jamieson Gross
jgross@cloud.edu •• 243.1435, ext. 273

Employment:

Entry level positions at minimum wage with a certificate.
\$30,000-\$60,000 with an associate's degree.



Potential Careers:

- Agronomist
- Ag & Food Science Technician
- Ranch Manager
- Agriculture Teacher/Professor
- Communications Specialist

Agriculture includes the principles of animal care, crop and vegetable farming, marketing of farm products, sustainable practices, and large property management. Certificates in the areas of Production and Services, Agri-Biotechnology, and Precision Agriculture can be completed in one year or less and can be a starting point for a two-year degree. A.A.S. and A.G.S. degrees are considered "ready for work" programs. Students interested in pursuing a Bachelor's degree should enroll in the A.S. degree. The Ag unit provides a hands-on learning lab for students in Agriculture.

DEGREES & CERTIFICATES

Production & Services16-hour certificate	Agri-Biotechnology..... A.A.S. - 67 hours
Agri-Biotechnology.....32-hour certificate	Precision Agriculture..... A.A.S. - 62 hours
Precision Agriculture.....30-hour certificate	Production & Services A.A.S. - 62 hours
Production & Services30-hour certificate	Associate of General Studies..... A.G.S. - 62 hours
Production & Services45-hour certificate	Associate of Science A.S. - 62 hours

Ag Education majors, refer to the Education Field of Study

Fields of Study

AGRICULTURE

AGRICULTURE PRODUCTION & SERVICES

16-Hour Certificate

Required General Education Courses 3 cr

<i>Mathematics Requirement</i>	3
MA110 Intermediate Algebra (3 cr) or	
MA105 Survey of Math (3 cr) or	
Mathematics General Education Course	

Required Agriculture Courses 6-7 cr

AG127 Ag Science (4 cr) or	
AG101 Plant Science (4 cr) or	
AG150 Introduction to Horticulture (4 cr) or	
AG115 Animal Science (3cr)	3-4

AG132 Agriculture Management (3 cr) or	
AG134 Agricultural Marketing (3 cr)	3

Elective Courses 6-7 cr

AG102 Intro to Plant Pest Control	3
AG105 Range Management	3
AG111 Animal Management	3
AG116 Principle of Feeding	3
AG123 Beef Science	2
AG128 Animal Health & Nutrition	3
AG166 Fundamentals of Livestock Nutrition	3
AG170 Wildlife Management	3
AG210 Ag Advertising & Design	3
AG217 Farm Computer Applications	3
AG220 Cooperative Ed Internship	1-4



Fields of Study

AGRICULTURE

AGRI-BIOTECHNOLOGY

32-Hour Certificate

General Education Required Courses 9 cr

SC101	General Biology	4
SC130	General Chemistry	5

Required Agri-Biotechnology Courses 23 cr

CM101	English Composition I	3
AG127	Ag Science for Agri-Biotechnology	4
AG147	Lab Methods for Agri-Biotechnology	4
AG160	Introduction to Biotechnology	3
AG236	Molecular Biology for Agri-Biotechnology	4
AG237	Integrated Organic Chemistry & Biochemistry for Agri-Biotechnology	5



Fields of Study

AGRICULTURE

PRECISION AGRICULTURE

30-Hour Certificate

Required General Education Courses 6 cr

<i>Mathematics Requirement</i>	3
MA110 Intermediate Algebra (3 cr) or	
MA105 Survey of 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 Precision Agriculture Courses 19 cr

AG101 Plant Science	4
AG102 Introduction to Plant Pest Control	3
AG132 Agriculture Management	3
AG255 Precision Ag Hardware	3
AG256 Precision Ag Software	3
AG257 Precision Ag Machine Data Management	3

Elective Courses * (CCCC) 5 cr

AG103 Plant & Soils for Crop Production	3
AG104 Soils	4
AG105 Range Management	3
AG106 Soil Classification and Evaluation	1
AG107 Agronomy Id & Experimentation	1
AG112 Agronomy Id & Experimentation II	1
AG115 Animal Science	3
AG134 Agriculture Marketing	3
AG160 Introduction to Biotechnology	3
AG164 Advanced Soil Classification & Evaluation	1
AG210 Ag Advertising & Design	3
AG217 Farm Computer Applications	3
UA100 Introduction to sUAS	3
UA201 sUAS Command, Control, & Comm	3
UA210 sUAS Systems & Conceptual Design	3
WE110 Electrical Theory	3
WE240 GIS/GPS	3

Courses CCCC will accept as Electives from Highland CC*

AB126 Principles of Agronomy
AB128 Agriculture Electronic Devices & Systems
AB130 Precision Farming Systems
AB136 Intro to Agricultural GIS
AB138 Remote Sensing
AB142 Field Mapping for Decision Making
AB144 Intermediate Agricultural GIS
AB244 Precision Agriculture Capstone

*All electives should be selected with assistance from an advisor. Substitutions must be approved by department chair.



Fields of Study

AGRICULTURE

AGRICULTURE PRODUCTION & SERVICES

30-Hour Certificate

Required General Education Courses 6 cr

<i>Mathematics Requirement</i>	3
MA110 Intermediate Algebra (3 cr) or MA105 Survey of 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 7-10 cr

AG127 Ag Science (4 cr)	
or	
AG101 Plant Science (4 cr) or AG150 Introduction to Horticulture (4 cr) and AG115 Animal Science (3cr)	4-7
AG132 Agriculture Management (3 cr) or AG134 Agricultural Marketing (3 cr)	3

Elective Courses 14 -17 cr

Economics

AG130 Principles of Agriculture Economics	3
AG132 Ag Management	3
AG134 Ag Marketing	3
AG155 Comparative Ag	3
AG217 Farm Computer Applications	3
AG210 Ag Advertising and Design	3
AG220 Cooperative Ed Internship	1-6

Agronomy

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
AG155 Comparative Ag	1
AG160 Intro to Biotechnology	3
AG220 Cooperative Ed Internship	1-6

Animal Science

AG111 Animal Management	3
AG116 Principle of Feeding	3
AG118 Principles of Livestock Selection	2
AG119 Principles of Livestock Selection II	1
AG123 Beef Science	2
AG128 Animal Health & Nutrition	3
AG139 Farm Animal Reproduction	3
AG155 Comparative Ag	1
AG159 Equine Evaluation	1
AG160 Intro to Biotechnology	3
AG166 Fundamentals of Livestock Nutrition	3
AG220 Cooperative Ed Internship	1-6

Equine Science

AG111 Animal Management	3
AG116 Principles of Feeding	3
AG122 Intro to Horsemanship	2
AG128 Animal Health & Nutrition	3
AG139 Farm Animal Reproduction	3
AG155 Comparative Ag	1
AG156 Equine Care	2
AG157 Equine Industry Management I	3
AG159 Equine Evaluation	1
AG160 Intro to Biotechnology	3
AG165 Equine Evaluation II	2
AG166 Fundamentals of Livestock Nutrition	3
AG220 Cooperative Ed Internship	1-6



Fields of Study

AGRICULTURE

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 MA105 Survey of 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 10-13 cr

AG127 Ag Science (4 cr)	
or	
AG101 Plant Science (4 cr) or AG150 Introduction to Horticulture (4 cr) and AG115 Animal Science (3cr)	4-7
AG130 Principles of Agriculture Economics	3
AG132 Agriculture Management or AG134 Agriculture Marketing	3

Elective Courses 22 -25 cr

Business/Economics	
AG130 Principles of Agriculture Economics	3
AG132 Ag Management	3
AG134 Ag Marketing	3
AG217 Farm Computer Applications	3
AG210 Ag Advertising and Design	3
AG212 Agricultural Law	2
BE161 Accounting I	3
BE162 Accounting II	3
BE188 Principles of Advertising	3

Agronomy	
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
AG160 Intro to Biotechnology	3

Animal Science	
AG111 Animal Management	3
AG118 Principles of Livestock Selection	2
AG119 Principles of Livestock Selection II	1
AG123 Beef Science	2
AG128 Animal Health & Nutrition	3
AG139 Farm Animal Reproduction	3
AG159 Equine Evaluation	1
AG166 Fundamentals of Livestock Nutrition	3

Equine Science

AG111 Animal Management	3
AG122 Intro to Horsemanship	2
AG128 Animal Health & Nutrition	3
AG139 Farm Animal Reproduction	3
AG157 Equine Industry Management I	3
AG159 Equine Evaluation	1
AG165 Equine Evaluation II	2

Commercial Gardening

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
AG160 Intro to Biotechnology	3
AG240 The Horticulture Industry	3
AG241 Commercial Productions of Fruits & Vegetables	3

General Electives

AG155 Comparative Ag	1
AG220 Cooperative Ed Internship	1-6
AG299 CDL: Maps, Log Books, and DOT Regulations	1
AG300 CDL: Commercial Driver's License	1
AG301 Truck & Tractor Trailer Vehicle Inspection & Maintenance	1
AG302 In City Commercial Driver's License Driving	1

Fields of Study

AGRICULTURE

AGRI-BIOTECHNOLOGY

Associate of Applied Science - 67 Hours

General Education Required Courses 17-20 cr

Communication Requirement 3-6

- Proven English Grammatical Proficiency **or**
 CM101 English Composition I (3 cr) **or**
 CM120 Survey of Technical Writing (3 cr)
 CM115 Public Speaking (3 cr) **or**
 Interpersonal Communications (3 cr)

Humanities Requirement (1 area required) 3

- Art Humanities
 Music Literature
 Theatre Philosophy
 Foreign Language History

Mathematics Requirement 3

- MA110 Intermediate Algebra (3 cr) **or**
 MA105 Survey of Math (3 cr) **or**
 Mathematics General Education Course

Natural Science Requirement 5

- SC110 Principles of Biology I

Social/Behavioral Science Requirement 3

- SS130 Introduction to Sociology

Required Agri-Biotechnology Courses 30 cr

- AG127 Ag Science for Agri-Biotechnology 4
 AG147 Lab Methods in Agri-Biotechnology 4
 AG160 Introduction to Biotechnology 3
 AG236 Molecular Biology for Agri-Biotechnology 4
 AG237 Integrated Organic Chemistry &
 Biochemistry for Agri-Biotechnology 5
 SC111 Microbiology Lecture 3
 SC112 Microbiology Lab 2
 SC131 Chemistry I 5

Elective Courses 17-20 cr

- AG101 Plant Science 4
 AG108 Environmental Quality 3
 AG109 Environmental Quality Lab 1
 AG115 Animal Science 3
 AG220 Cooperative Ed Internship 2
 SC120 Human Anatomy & Physiology I 4
 SC121 Human Anatomy & Physiology II 4



Fields of Study

AGRICULTURE

PRECISION AGRICULTURE

Associate of Applied Science - 62 Hours

Required General Education Courses 16-19 cr

Communication Requirement 3-6

- Proven English Grammatical Proficiency **or**
 CM101 English Composition I (3 cr) **or**
 CM120 Survey of Technical Writing (3 cr)
 CM115 Public Speaking (3 cr) **or**
 Interpersonal Communications (3 cr)

Humanities Requirement (1 area required) 3

- Art Humanities
 Music Literature
 Theatre Philosophy
 Foreign Language History

Mathematics Requirement 3

- MA110 Intermediate Algebra (3 cr) **or**
 MA105 Survey of Math (3 cr) **or**
 Mathematics General Education Course

Natural Science Requirement (1 area required) 4

- Biological Science General Education
 Physical Science General Education

Social/Behavioral Science Requirement (1 area required) 3

- Economics Anthropology
 Psychology Political Science
 Sociology Geography

Required Precision Agriculture Courses 19 cr

- AG101 Plant Science 4
 AG102 Introduction to Plant Pest Control 3
 AG132 Agriculture Management 3
 AG255 Precision Ag Hardware 3
 AG256 Precision Ag Software 3
 AG257 Precision Ag Machine Data Management 3

Elective Courses (CCCC) 24-27 cr

- AG103 Plant & Soils for Crop Production 3
 AG104 Soils 4
 AG105 Range Management 3
 AG106 Soil Classification and Evaluation 1
 AG107 Agronomy Id & Experimentation 1
 AG112 Agronomy Id & Experimentation II 1
 AG115 Animal Science 3
 AG134 Agriculture Marketing 3
 AG160 Introduction to Biotechnology 3
 AG164 Advanced Soil Classification & Evaluation 1
 AG210 Ag Advertising & Design 3
 AG217 Farm Computer Applications 3
 UA100 Introduction to sUAS 3
 UA201 sUAS Command, Control, & Comm 3
 UA210 sUAS Systems & Conceptual Design 3
 WE110 Electrical Theory 3
 WE240 GIS/GPS 3

Courses CCCC will accept as Electives from Highland CC*

- AB126 Principles of Agronomy
 AB128 Agriculture Electronic Devices & Systems
 AB130 Precision Farming Systems
 AB136 Intro to Agricultural GIS
 AB138 Remote Sensing
 AB142 Field Mapping for Decision Making
 AB144 Intermediate Agricultural GIS
 AB244 Precision Agriculture Capstone



Fields of Study

AGRICULTURE

AGRICULTURE PRODUCTION & SERVICES

Associate of Applied Science - 62 Hours

Required General Education Courses 16-19 cr

<i>Communication Requirement</i>	3-6
Proven English Grammatical Proficiency or	
CM101 English Composition I (3 cr) or	
CM120 Survey of Technical Writing (3 cr)	
CM115 Public Speaking (3 cr) or	
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	
MA105 Survey of Math (3 cr) or	
Mathematics General Education Course	
<i>Natural Science Requirement</i>	4
Science Gen Ed with Lab	
<i>Social/Behavioral Science Requirement</i>	3
(1 area required)	
Economics	Anthropology
Psychology	Political Science
Sociology	Geography

Required Agriculture Courses 19 cr

AG101 Plant 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 24-27 cr

Economics	
AG155 Comparative Ag	1
AG157 Equine Industry Management I	3
AG190 Marketing the Equine Industry	3
AG217 Farm Computer Applications	3
AG220 Cooperative Ed Internship	1-6
AG300 Commercial Driver's License	1
BE100 Introduction to Business	3
BE160 Business Accounting	3
BE161 Accounting I	3
BE162 Accounting II	3
BE188 Principles of Advertising	3
MG102 Small Business Management	3
Agronomy	
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	1
AG108 Environmental Quality	3
AG109 Environmental Quality Lab	1
AG112 Agronomy Identification & Experimentation	1
AG155 Comparative Agriculture	1
AG160 Introduction to Biotechnology	3
AG164 Advanced Soil Classification & Evaluation	1
AG170 Wildlife Management	3
AG220 Coop Ed Internship	1-6
AG300 Commercial Driver's License	1
BE152 Salesmanship	3
WE240 GIS/GPS	3

Animal Science

AG111 Animal Management	3
AG116 Principles of Feeding	3
AG118 Principles of Livestock Selection I	1
AG119 Principles of Livestock Selection II	2
AG128 Animal Health and Nutrition	3
AG139 Farm Animal Reproduction	4
AG155 Comparative Agriculture	1
AG156 Equine Care	2
AG159 Equine Evaluation	1
AG160 Introduction to Biotechnology	3
AG166 Fundamentals of Livestock Nutrition	3
AG220 Coop Ed Internship	1-3
AG230 Equine Reproduction	3

Equine Science

AG111 Animal Management	3
AG116 Principles of Feeding	3
AG122 Introduction to Horsemanship	2
AG128 Animal Health & Nutrition	3
AG139 Farm Animal Reproduction	4
AG155 Comparative Agriculture	1
AG157 Equine Industry Management	3
AG159 Equine Evaluation	1
AG160 Introduction to Biotechnology	3
AG165 Equine Evaluation II	1
AG166 Fundamentals of Livestock Nutrition	3
AG190 Marketing the Equine Industry	3
AG220 Coop Ed Internship	1-3

Substitutions must be approved by the department chair.



Fields of Study

AGRICULTURE

Associate of General Studies - 62 Hours

Required General Education Courses 25 cr

<i>Communication Requirement</i>	6
CM101 English Composition I (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>	3
(Must be from second area)	

<i>Natural Science Requirement</i>	4
Physical Science w/lab or	
Biological Science w/lab	

<i>Open General Education Elective</i>	3
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Required Agriculture Courses 13 cr

AG101 Plant 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 18 cr

Agronomy

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 Eval	1
AG107 Agronomy ID and Exp.	1
AG112 Agronomy ID and Exp. II	1
AG108 Environmental Quality	3
AG109 Environmental Quality Lab	1
AG164 Advanced Soil Class and Eval	1

Animal Science

AG111 Animal Management	3
AG116 Principles of Feeding	3
AG118 Prin. of Livestock Selection I	2
AG119 Prin. of Livestock Selection II	1
AG123 Beef Science	3

AG127 Ag. Sci. of Agri-Biotech	4
AG128 Animal Health and Nutrition	3
AG139 Farm Animal Reproduction	4
AG160 Intro to Biotechnology	3

Business

AG132 Agriculture Management	3
AG134 Agricultural Marketing	3
AG147 Lab Methods in Ag-Biotech	4
AG217 Farm Computer Application I	3
BE100 Intro to Business	3
BE121 Business Communications	3
BE139 Basic Personal Finance	1
BE152 Salesmanship	3
BE153 Personal Finance	3
BE154 Business Law	3
BE155 Marketing	3
BE160 Business Accounting	3
BE161 Accounting I	3
BE162 Accounting II	3
BE165 Computerized Accounting	3
BE166 Payroll Accounting	3
BE170 Business Statistics	3
BE172 Customer Service	3
BE185 Human Resource Management	3
BE188 Principles of Advertising	3
MG101 Management Principles	3
MG102 Small Business Management	3

Communications

AR120 Design I	3
AR121 Graphic Design I	3
AR129 Introduction to Digital Photography	3
CM129 Media Law and Ethics	3
CM136 Mass Communications Software	3
CM137 Intro to Multimedia Communications	3
CM138 Broadcast News	3
CM155 Digital Magazine Prod: Storytelling	3
CM156 Digital Magazine Prod: Design and Style	3
CM157 Mass Media Production I	3
CM158 Mass Media Production II	3
CS104 Intro to Website Design	3
CS107 Graphic Software Applications	3



Fields of Study

AGRICULTURE

Associate of General Studies (con't)

JN100	Mass Media in Society	3		
JN101	Basic Media Writing	3		
JN140	Beyond Web 2.0: Social Media as Identity	3		
	Equine			
AG122	Intro to Horsemanship	2		
AG125	Horse Science	3		
AG129	Equine Groundwork Training	2		
AG157	Equine Industry Management I	3		
AG159	Equine Evaluation	1		
AG165	Equine Evaluation II	1		
AG166	Fund. of Livestock Nutrition	3		
AG188	Varsity Sports: Eques/Rodeo I	1		
AG189	Varsity Sports: Eques/Rodeo II	1		
AG190	Marketing the Equine Industry	3		
AG225	Basic Equitation	3		
AG226	Advanced Equitation	3		
AG228	Focused Equitation	3		
	Commercial Gardening			
AG102	Intro to Plant Pest Control	3		
AG240	The Horticulture Industry	3		
AG241	Com. Prod. of Fruit and Veg.	3		
	Agri-Biotechnology			
AG160	Intro to Biotechnology	3		
AG236	Molecular Bio for Agri-Biotech	4		
AG237	Int. Org. & Biochem for AgBio	5		
AG250	Intro to Genetic Engineering	4		
	Precision Agriculture			
AG255	Precision Ag Hardware	3		
AG256	Precision Ag Software	3		
AG257	Prec. Ag Machine Data Man.	3		
WE240	GIS/GPS	3		
	Additional Electives			
AG170	Wildlife Management	3		
AG220	Cooperative Education Internship	1-4		
AG299	CDL: maps, log books, DOT Regs	1		
AG300	Commercial Driver's License	1		
AG301	Truck and Tractor Trailer Insp & Maint	1		
AG302	In City CDL Driving	1		
CS108	Computer Applications	3		
IE106	Welding	3		
IE107	Advanced Welding	3		
IE116	OSHA 10-Hour Construction Training	.5		
IE117	OSHA 10-Hour General Industry Training	.5		
WE120	Hydraulics	3		
WE150	Mechanical Systems	3		
WE240	GIS/GPS	3		
SE100	Introduction to Solar Energy	3		
UA100	Intro to UAV	3		
UA210	sUAS Systems & Conceptual Design	3		
WE110	Electrical Theory	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



Fields of Study

AGRICULTURE

Associate of Science - 62 Hours

Required General Education Courses 32 - 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>	8-10
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	

Required Agriculture Courses 13 cr

AG101 Plant 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	
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 Eval	1
AG107 Agronomy ID and Exp.	1
AG112 Agronomy ID and Exp. II	1
AG108 Environmental Quality	3
AG109 Environmental Quality Lab	1
AG164 Advanced Soil Class and Eval	1

Animal Science	
AG111 Animal Management	3
AG116 Principles of Feeding	3
AG118 Prin. of Livestock Selection I	2
AG119 Prin. of Livestock Selection II	1
AG123 Beef Science	3
AG127 Ag Science for Agri-Biotechnology	4
AG128 Animal Health and Nutrition	3
AG139 Farm Animal Repro	4

Business

AG132 Agriculture Management	3
AG134 Agricultural Marketing	3
AG147 Lab Methods in Ag-Biotech	4
AG217 Farm Computer Application I	3
BE100 Intro 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 Small Business Management	3

Commercial Gardening

AG240 The Horticulture Industry	3
AG241 Commercial Production of Fruit & Vegetables	3

Communications

CM136 Mass Communications Software	3
CM137 Intro to Multimedia Communications	3
JN100 Mass Media in Society	3

Equine

AG122 Intro to Horsemanship	2
AG125 Horse Science	3
AG129 Equine Groundwork Training	2
AG157 Equine Industry Management I	3
AG159 Equine Evaluation	1
AG165 Equine Evaluation II	1
AG166 Fund. of Livestock Nutrition	3
AG188 Varsity Sports: Eques/Rodeo I	1
AG189 Varsity Sports: Eques/Rodeo II	1
AG190 Marketing the Equine Industry	3
AG225 Basic Equitation	3
AG226 Advanced Equitation	3
AG228 Focused Equitation	3

Math and Science (Pre-Vet)

MA112 Trigonometry	3
SC110 Principles of Biology	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

Additional Electives

AG155 Comparative Ag	1
AG160 Introduction to Biotechnology	3
AG170 Wildlife Management	3
AG220 Cooperative Education Internship	1-4
WE240 GIS/GPS	3

Open Electives 6 cr

Focus Areas:

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

Employment:

\$40,000-\$100,000

BUSINESS

Department Chair: Shelly Farha
sfarha@cloud.edu •• 243.1435, ext. 260



Potential Careers:

- Accountant
- Payroll Manager
- Office Manager
- Entrepreneur
- Sale Representative
- Marketing Analyst

Business offers broad-based programs that include the study of accounting, economics, management, and marketing. Students can complete a certificate in one year and be employable or use the certificate as a building block for a two year degree. The A.A.S. and A.G.S. are considered “go to work” programs. Students looking to complete a four year degree should consider the A.A. as transfer preparation.

DEGREES & CERTIFICATES

General Business16-hour certificate
 General Business30-hour certificate
 General Business A.A.S. - 63 hours

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

Fields of Study

BUSINESS

GENERAL BUSINESS 16-Hour Certificate

Required General Education Courses 3 cr

<i>Communication Requirement</i>	3
CM101 English Composition I (3 cr)	

Required Business Courses 9 cr

BE100 Introduction to Business	3
BE160 Business Accounting or	
BE161 Accounting I	3
MG102 Small Business Management	3

CA221 Job Search	1
CS108 Computer Applications	3
EC101 Principles of Macroeconomics	3
EC102 Principles of Microeconomics	3
MA115 Linear Algebra & General Calculus	3
MG101 Management Principles	3

Elective Courses 4 cr

BE115 Business Mathematics	3
BE121 Business Communications	3
BE153 Personal Finance	3
BE154 Business Law	3
BE155 Marketing	3
BE160 Business Accounting	3
BE161 Accounting I	3
BE162 Accounting II	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	3



Fields of Study

BUSINESS

GENERAL BUSINESS 30-Hour Certificate

Required General Education Courses 9 cr

<i>Communication Requirement</i>	6
CM101 English Composition I (3 cr)	
CM115 Public Speaking (3 cr)	
<i>Mathematics Requirement</i>	3
MA105 Survey of Math or	
MA110 Intermediate Algebra or	
Mathematics General Education Course	

Required Business Courses 18 cr

BE100 Introduction to Business	3
BE152 Salesmanship	3
BE160 Business Accounting or	
BE161 Accounting I	3
BE162 Accounting II or	
BE154 Business Law	3
MG101 Management Principles	3
MG102 Small Business Management	3

Elective Courses 3 cr

BE115 Business Mathematics	3
BE121 Business Communications	3
BE153 Personal Finance	3
BE154 Business Law	3
BE155 Marketing	3
BE160 Business Accounting	3
BE161 Accounting I	3
BE162 Accounting II	3
BE163 Financial Accounting	4
BE164 Managerial 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	3
CA221 Job Search	1
CS108 Computer Applications	3
EC101 Principles of Macroeconomics	3
EC102 Principles of Microeconomics	3
MA115 Linear Algebra & General Calculus	3



Fields of Study

BUSINESS

GENERAL BUSINESS Associate of Applied Science 63 Hours

Required General Education Courses		18 cr	Elective Courses		9 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)			BE153	Personal Finance	3
<i>Humanities Requirement (1 area required)</i>		3	BE160	Business Accounting	3
Art Humanities			BE161	Accounting I	3
Music Literature			BE162	Accounting II	3
Theatre Philosophy			BE163	Financial Accounting	4
Foreign Language History			BE164	Managerial Accounting	3
<i>Mathematics Requirement</i>		3	BE170	Business Statistics	3
MA105 Survey of Math or			BE210	Leadership Development	3
MA110 Intermediate Algebra or			CS108	Computer Applications	3
Mathematics General Education Course			EC102	Principles of Microeconomics	3
<i>Natural Science Requirement</i>		3-5	MA115	Linear Algebra & General Calculus	3
Physical Science or					
Biological Science					
<i>Social/Behavioral Science Requirement</i>		3			
EC101 Principles of Macroeconomics					
Required Business Courses		36 cr			
BE100	Introduction to Business	3			
BE152	Salesmanship	3			
BE154	Business Law	3			
BE155	Marketing	3			
BE160	Business Accounting or				
BE161	Accounting I	3			
BE165	Computerized Accounting	3			
BE166	Payroll Accounting	3			
BE185	Human Resource Management	3			
BE188	Principles of Advertising	3			
BE220	Cooperative Ed Internship	2			
CA221	Job Search	1			
MG101	Management Principles	3			
MG102	Small Business Management	3			

Fields of Study

BUSINESS

Associate of General Studies
62 Hours

Required General Education Courses	25 cr	Elective Courses	18 cr
<i>Communication Requirement</i> 6		Business	
CM101 English Composition I (3 cr)		BE115 Business Math	3
CM115 Public Speaking (3 cr) or		BE121 Business Communications	3
CM240 Interpersonal Communications (3 cr)		BE152 Salesmanship	3
<i>Humanities Requirement (2 areas required)</i> 6		BE153 Personal Finance	3
Art Humanities		BE154 Business Law	3
Music Literature		BE155 Marketing	3
Theatre Philosophy		BE160 Business Accounting	3
Foreign Language History		BE163 Financial Accounting	4
<i>Mathematics Requirement</i> 3		BE164 Managerial Accounting	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 (2 areas required)</i> 6		BE220 Cooperative Ed Internship	3
EC101 Principles of Macroeconomics (3 cr)		MG101 Management Principles	3
(1 additional area required) (3 cr)		MG102 Small Business Management	3
Anthropology Geography		Additional Electives	
Psychology Political Science		CA221 Job Search	1
Sociology		CS108 Computer Applications	3
Required Business Courses 9 cr		EC102 Principles of Microeconomics	3
BE100 Introduction to Business	3	MA115 Linear Algebra/General Calculus	3
BE161 Accounting I	3	Life Skills	
BE162 Accounting II	3	BE139 Basic Personal Finance	1
		BE210 Leadership Development	3
		PE141 Personal Wellness	3
		PE250 Stress Management	3
		SS106 Marriage and Family	3

Open Electives 10 cr

Fields of Study

BUSINESS

Associate of Arts
62 Hours

Required General Education Courses		31 cr	Elective Courses		12 cr
<i>Communication Requirement</i>		9	Business		
CM101	English Composition I (3 cr)		BE115	Business Math	3
CM102	English Composition II (3 cr)		BE121	Business Communications	3
CM115	Public Speaking (3 cr) or		BE152	Salesmanship	3
CM240	Interpersonal Communications (3 cr)		BE153	Personal Finance	3
<i>Humanities Requirement (2 areas required)</i>		6	BE154	Business Law	3
Art	Humanities		BE155	Marketing	3
Music	Literature		BE160	Business Accounting	3
Theatre	Philosophy		BE163	Financial Accounting	4
Foreign Language	History		BE164	Managerial Accounting	3
<i>Mathematics Requirement</i>		3	BE165	Computerized Accounting	3
Mathematics General Education Course			BE166	Payroll Accounting	3
<i>Natural Science Requirement (1 area required)</i>		4-5	BE170	Business Statistics	3
Physical Science (4-5 cr)			BE185	Human Resource Management	3
Biological Science (4-5 cr)			BE188	Principles of Advertising	3
<i>Social/Behavioral Science Requirement (2 areas required)</i>		6	BE210	Leadership Development	3
EC101	Principles of Macroeconomics (3 cr)		BE220	Cooperative Ed Internship	2
<i>(1 additional area required) (3 cr)</i>			MG101	Management Principles	3
Anthropology	Geography		MG102	Small Business Management	3
Psychology	Political Science		Additional Electives		
Sociology			CA221	Job Search	1
<i>Open General Education Elective</i>		3	CS108	Computer Applications	3
			MA115	Linear Algebra/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: Jamie Durler
jdurler@cloud.edu • 243.1435, ext. 240

Employment:

\$30,000-\$65,000



Potential Careers:

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

Communications develops practical skills and applied knowledge by engaging students with real-life communications issues. Coursework develops understanding of fundamental principles and skills through hands-on experiences. A certificate can be completed in one year and can serve as the first step to the A.A.S. or A.G.S. degrees which are considered "ready to work" degrees. Students interested in transferring to a bachelor's program should enroll in the A.A. program.

DEGREES & CERTIFICATES

Journalism-Mass Communications
.....30-hour certificate

Visual-Mass Communications
.....30-hour certificate

Journalism-Mass Communications
..... A.A.S. - 64 hours

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

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

Fields of Study

COMMUNICATIONS

JOURNALISM - MASS COMMUNICATIONS 30-Hour Certificate

General Education Required Courses 6 cr

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

Required Communications Courses 24 cr

BE155	Marketing	3
BE188	Principles of Advertising	3
CM157	Mass Media Production I	3
CM158	Mass Media Production II	3
CM220	Cooperative Ed Internship	3
CS107	Graphic Software Applications	3
JN100	Mass Media in Society	3
JN101	Basic Media Writing	3



Fields of Study

COMMUNICATIONS

VISUAL - MASS COMMUNICATIONS 30-Hour Certificate

General Education Required Courses 6 cr

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

Required Courses 24 cr

AR120 Design I	3
AR121 Graphic Design I	3
AR122 Graphic Design II or	
CM220 Cooperative Ed Internship	3
AR129 Introduction to Digital Photography	3
BE188 Principles of Advertising	3
CS107 Graphic Software Applications	3
CM156 Digital Magazine Prod: Design & Style or	
CM157 Mass Media Production I	3
JN101 Basic Media Writing	3



Fields of Study

COMMUNICATIONS

JOURNALISM - MASS COMMUNICATIONS

Associate of Applied Science

64 Hours

General Education Required Courses 19 cr

Communication Requirement 6
 CM101 English Composition I (3 cr)
 CM115 Public Speaking (3 cr) **or**
 CM240 Interpersonal Communication (3 cr)

Humanities Requirement (1 area required) 3
 Art Humanities
 Music Literature
 Theatre Philosophy
 Foreign Language History

Mathematics Requirement 3
 MA105 Survey of Math **or**
 MA110 Intermediate Algebra **or**
 Mathematics General Education Course

Natural Science Requirement 4
 SC107 Meteorology (4 cr)

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

Required Communication Courses 30 cr

AR120 Design I 3
 AR129 Introduction to Digital Photography 3
 BE155 Marketing 3
 BE188 Principles of Advertising 3
 CM157 Mass Media Production I 3
 CM158 Mass Media Production II 3
 CS107 Graphic Software Applications 3
 JN100 Mass Media and Society 3
 JN101 Basic Media Writing 3
 JN140 Beyond Web 2.0: Social Media as Identity 3

Elective Courses 15 cr

AR121 Graphic Design I 3
 AR122 Graphic Design II 3
 BE152 Salesmanship 3
 CM138 Broadcast News 3
 CM139 Sports Broadcasting 3
 CM155 Digital Magazine Productions: Storytelling 3
 CM156 Digital Magazine Production: Design & Style 3
 CM240 Interpersonal Communication 3
 CM220 Cooperative Ed Internship 1-6



Fields of Study

COMMUNICATIONS

Associate of General Studies
62 Hours

Required General Education Courses 25 cr

Communication Requirement 6
CM101 English Composition I (3 cr)
CM115 Public Speaking (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

Required Communications Courses 9 cr

CM102 English Composition II or
CM106 Creative Writing 3
CM240 Interpersonal Communication 3
Choose 1 of the following: 3
CM121 Introduction to Literature
CM123 American Literature II
CM124 World Literature & the Human Experience
CM140 Theatre Appreciation
CM141 Introduction to Performance: Offstage & On
JN100 Mass Media and Society

Elective Courses 12 cr

Art
AR130 Drawing I 3
AR140 Painting I 3
English
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
FL111 Spanish I 4
PH100 Introduction to Philosophy 3

Communications

AR120 Design I 3
AR121 Graphic Design I 3
AR129 Introduction to Digital Photography 3
BE155 Marketing 3
BE188 Principles of Advertising 3
CM129 Media Law and Ethics 3
CM136 Mass Communications Software 3
CM137 Introduction to Multimedia Communications 3
CM138 Broadcast News 3
CM139 Sports Broadcasting 3
CM155 Digital Magazine Production: Storytelling 3
CM156 Digital Production: Design and Style 3
CM157 Mass Media Production I 3
CM158 Mass Media Production II 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
MU101 American Music 3
MU103 History of Rock 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

Theater

CM140 Theater Appreciation 3
CM141 Introduction to Performance: Offstage and On 3
CM142 Advanced Performance 3
CM143 Play Production 3
CM146 Play Production II 3
CM148 American Cinema Appreciation 3

Additional Electives

CA221 Job Search 1
CM220 Cooperative Education Internship 1-4
CS108 Computer Applications 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 17 cr

Fields of Study

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

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)	
CM141 Introduction to Performance: Offstage & On (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
CM155 Digital Magazine Production: Storytelling	3
CM156 Digital Magazine Production: Design & Style	3
CM157 Mass Media Production I	3

FL111 Spanish I	4
PH100 Introduction to Philosophy	3
SS108 Women in American Society	3

Communications

AR120 Design I	3
AR121 Graphic Design I	3
AR129 Introduction to Digital Photography	3
BE152 Salesmanship	3
BE155 Marketing	3
BE188 Principles of Advertising	3
CM129 Media Law and Ethics	3
CM136 Mass Communications Software	3
CM137 Introduction to Multimedia	3
Communications	3
CM138 Broadcast News	3
CM139 Sports Broadcasting	3
CM155 Digital Magazine Production: Storytelling	3
CM156 Digital Magazine Production:	
Design and Style	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
MU101 American Music	3
MU103 History of Rock	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

Theater

CM140 Theater Appreciation	3
CM141 Intro to Performance: Offstage and On	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: Kristina Frost
kgfrost@cloud.edu • 243.1435, ext. 265

Employment:

\$25,000-\$85,000



Potential Careers:

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

Education includes programs in elementary and secondary education in the following focus areas: agriculture, art, communications and theatre, health and physical education, history, math, music, science, and social science, with coursework also available in early childhood education. While there are some opportunities in supporting roles in education for employment after two years, most teaching positions will require a bachelor's degree. The A.A. degree is the best option for students planning to continue college after a two year degree.

DEGREES & CERTIFICATES

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

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

Fields of Study

EDUCATION

Associate of General Studies 62 Hours

Required General Education Courses 25 cr

Communication Requirement	6
CM101 English Composition I (3 cr)	
CM115 Public Speaking (3 cr)	
Humanities Requirement	3
Art Humanities	
Music Literature	
Theatre Philosophy	
Foreign Language History	
Social/Behavioral Science Requirement	3
SS101 General Psychology (3 cr)	
Humanities or *Social Science Requirement (Must be from second area) *if choosing a Social Science, it must be from an area other than Psychology.	3
Mathematics Requirement	3
Mathematics General Education Course or MA110 Intermediate Algebra (3 cr)	
Natural Science Requirement	4
Physical Science w/Lab or Biological Science w/Lab	
Open General Education Elective	3

Required Education Courses 7 cr

ED100 Introduction to Education	3
ED101 Introduction to Education Practicum 1-2	
SS105 Human Growth & Development	3

Elective Courses 15 cr

Agriculture	
AG101 Plant Science	4
AG104 Soils	3
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 Lit & the Human Experience	3
CM125 Literature for Children	3
CM127 Short Story	3
CM136 Mass Communications Software	3
CM137 Intro to Multimedia Communications	3
CM138 Broadcast News	3
CM139 Sports Broadcasting	3
CM140 Theatre Appreciation	3
CM141 Intro to Performance: Offstage & On	3
CM142 Advanced Performance	3
CM143 Play Production	3
CM156 Digital Magazine Production: Design and Style	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 Development	3
HE151 Early Childhood Development 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

Fields of Study

EDUCATION

Associate of General Studies (Con't)

Math

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

Music

MU100	Music Appreciation	3
MU101	American Music	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 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
SC134	Organic Chemistry I	5
SC135	Organic 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
SS105	Human Growth and Development	3
SS106	Marriage and Family	3
SS125	Introduction to Cultural Anthropology	3
SS130	Introduction to Sociology	3
SS201	Social Problems	3

Additional Electives

CS108	Computer Applications	3
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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

15 cr



Fields of Study

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 15 cr

Agriculture

AG101 Plant Science	4
AG104 Soils	3
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 Short Story	3
CM136 Mass Communications Software	3
CM137 Intro to Multimedia Communications	3
CM138 Broadcast News	3
CM139 Sports Broadcasting	3
CM140 Theatre Appreciation	3
CM141 Introduction to Performance: Offstage & On	3
CM142 Advanced Performance	3
CM143 Play Production	3
CM156 Digital Magazine Production: Design and Style	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

Fields of Study

EDUCATION

Associate of Arts (Con't)

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

Music		
MU100	Music Appreciation	3
MU101	American Music	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 & 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 II	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
SC134	Organic Chemistry I	5
SC135	Organic 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

Additional Electives		
CS108	Computer Applications	3

Open Electives 9 cr



Focus Areas:

**Nursing (ADN), Health,
Recreation,
Athletic Training,
Nurse's Aid**

HEALTH & HUMAN PERFORMANCE

Stefanie Perret, Nursing Administrator
sperret@cloud.edu •• 243.1435, ext. 332

Employment:

\$30,000-\$65,000



Recent graduates hired as:

- **Registered Nursing**
- **Firefighter**
- **Emergency Medical Tech**
- **Athletic Trainer**
- **Nutritionist**

Health and Human Performance is a broad field including Allied Health, Associate Degree Nursing, athletic training, health science, and health administration. The nursing program includes two options for students to obtain an associate degree in nursing: the Generic Traditional Option allows students to start directly in the program and the Advanced Standing Option allows for transfer into the program as a Licensed Practical Nurse. While there are some opportunities for employment in supporting roles after a two-year A.G.S. program, many careers require a bachelor's degree. Students planning to complete a four year degree should enroll in the A.S. program.

DEGREES & CERTIFICATES

Certified Nurse Aid.....	5 hours	Associate of General Studies.....	62 hours
Certified Medication Aid	5 hours	Associate of Science	62 hours
Emergency Medical Technician	16 hours		

Fields of Study

HEALTH AND HUMAN PERFORMANCE

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 *First Aid and Safety* and *General Psychology* or *Introduction to Sociology*, the student will be awarded a college-level certificate. These courses will apply toward the requirements for an Associate's degree if the student wishes to continue his or her education. In the state of Kansas, the entry-level hourly wages for certified EMTs range from \$13.00 to \$15.00 per hour with an annual salary ranging from \$26,000 to \$32,000.

EMT LEVEL I

16-Hour Certificate

Required General Education Courses (3 credits)

SS101	General Psychology or	
	SS130 Introduction to Sociology.....	3

Required Courses (13 credits)

AH163	Emergency Medical Technician	10
PE131	First Aid and Safety.....	3

HEALTH AIDE

Certified Nurse Aide, Medication Aide, Medication Aide Update, and Home Health Aide courses are taught at various times and locations in North Central Kansas throughout the year. Contact the Allied Health office at the college (785-243-1435, ext. 372) for information as to times and locations of these courses.

Certified Nurse Aide

The student who completes/passes this 90 hour course is eligible to take the Kansas State Certified Nurse Aide Exam for licensure as a Certified Nurse Aide. Course delivery methods may be completed by face-to-face classroom sessions or hybrid. This course is considered a Stand Alone Program and is not applicable to any degree, although many LPN (Licensed Practical Nursing) Programs require the applicant to have completed the CNA class before admission to their program. Many CNAs are employed in long-term care facilities. The beginning salary for a CNA in the local area ranges from \$8.50 to \$9.50 per hour. Please contact the Allied Health Office at Cloud County Community College for further information. (785)243-1435 Ext. 372.

Medication Aide

The student who completes/passes this 75 hour course is eligible to take the Kansas State Certified Medication Aide Exam for licensure as a Certified Medication Aide. Course delivery methods may be completed by face-to-face classroom sessions or hybrid. This course is considered a Stand Alone Program and available only to Certified Nurse Aides and is not applicable to any degree. Many CMAs are employed in Long Term Care and Assisted Living Facilities. Local beginning salary range from \$8.95 to \$10.00 per hour. Please contact the Allied Health Office at Cloud County Community College for further information. (785)243-1435 Ext 372.

LPN IV Certification

The Licensed Practical Nurse who completes this 32 hour course is eligible to take the Kansas State Exam for I.V. Therapy Certification. Upon certification and under the supervision of a professional registered nurse, the LPN may engage in a limited scope of intravenous fluid treatment. IV certified LPNs generally practice in long term care settings and some acute care. Salaries range from \$14.05-\$14.38. Please contact the Allied Health Office at Cloud County Community College for further information. (785)243-1435 Ext 372.



Fields of Study

HEALTH AND HUMAN PERFORMANCE

Associate of General Studies 62 Hours

Required General Education Courses 25 cr

<i>Communication Requirement</i>	6
CM101 English Composition I (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 Health and Human Performance Courses 15 cr

BE210 Leadership Development	3
PE131 First Aid and Safety	3
PE136 Theory of Coaching	3
PE141 Personal Wellness	3
PE150 Basic Care & Prevention of Athletic Injuries I	3

Elective Courses 17 cr

Physical Education	
PE101 Team Sports I	1
PE102 Team Sports II	1
PE107 Bowling I	1
PE108 Archery	1
PE110 Total Fitness	1
PE119 Weight Training and Physical Fitness	1
PE125 Fitness for Life	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
PE134 Personal and Community Health	3
PE135 Concepts of Physical Education	3
PE137 Introduction to Recreation	3
PE139 Techniques of Coaching Basketball	2

PE140 Techniques of Coaching Volleyball	2
PE143 Total Fitness II	1
PE144 Archery	1
PE146 Concepts of Team Sports	3
PE151 Basic Care & Prevention of Athletic Injuries II	3
PE155 Recognition & Care of Athletic Injuries	3
PE156 Principles of Strength & Conditioning	2
PE160 Varsity Sports: Baseball	1
PE161 Varsity Sports: Basketball	1
PE162 Varsity Sports: Track	1
PE164 Varsity Sports: Soccer	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

Science

SC120 Human Anatomy & Physiology I	4
SC121 Human Anatomy & Physiology II	4
SC126 Anatomy & Physiology	5
SC128 Pathophysiology	4

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
SS127 Child Psychology	3
SS130 Introduction to Sociology	3
SS131 Race and Ethnic Relations in the U.S.	3
SS150 Introduction to International Relations	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
CA221 Job Search	1
CS108 Computer Applications	3
GE101 Geography	3
HE124 Nutrition	3
MG101 Management Principles	3
MG102 Small Business Management	3
PE220 Coop Ed Internship	2

Life Skills

BE153 Personal Finance	3
PE250 Stress Management	3
SS106 Marriage & Family	3

Open Electives 6 cr

Fields of Study

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 21 cr

BE210 Leadership Development	3
PE131 First Aid and Safety	3
PE136 Theory of Coaching	3
PE141 Personal Wellness	3
PE150 Basic Care and Prevention of Athletic Injuries	3
Humanities Course	3
Social Science Course	3

Elective Courses 3 cr

Physical Education

PE101 Team Sports I	1
PE102 Team Sports II	1
PE108 Archery	1
PE110 Total Fitness	1
PE119 Weight Training and Phys Fitness	1
PE125 Fitness for Life	1
PE126 Cheerleading I	1
PE127 Cheerleading II	1
PE128 Dance Team I	1
PE129 Dance Team II	1
PE130 Intro to Physical Education	3
PE135 Concepts of Physical Education	3
PE137 Intro to Recreation	3
PE139 Techniques of Coaching Basketball	2
PE140 Techniques of Coaching Volleyball	2
PE143 Total Fitness II	1
PE144 Archery II	1
PE146 Concepts of Team Sports	3
PE151 Basic Care and Prevention of Athletic Injuries II	3

PE155 Recognition & Care of Athletic Injuries	3
PE156 Principles of Strength & Conditioning	2
PE160 Varsity Sports: Baseball	1
PE161 Varsity Sports: Basketball	1
PE162 Varsity Sports: Track	1
PE164 Varsity Sports: Soccer	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 Race & Ethnic Relations in the U.S.	3
SS140 U.S. Government: National	3
SS141 U.S. Government: State and Local	3
SS150 Introduction to International Relations	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
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 6 cr

Focus Areas:

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

HUMANITIES/ FINE ARTS

Division Dean: Brenton Phillips
bphillips@cloud.edu • 243.1435, ext. 244

Employment:

**\$45,000-\$100,000
(with bachelor's
degree)**



Potential Careers:

- **Graphic Designer**
- **Artists**
- **Attorney**
- **Event Coordinator**
- **Musician**

Humanities/Fine Arts help people understand, analyze, and explore the human condition. Student activities in music, theatre, and art club enhance a student's classroom learning. There are some opportunities for employment after two years, but many careers require a Bachelor of Arts degree. Students planning to complete a four year degree should enroll in the A.A. program.

DEGREES & CERTIFICATES

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

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

Fields of Study

HUMANITIES AND FINE ARTS

Associate of General Studies 62 Hours

Required General Education Courses 25 cr

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

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

<i>Humanities Requirement</i>	3
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Art Humanities
Music Literature
Theatre Philosophy
Foreign Language History

<i>Social/Behavioral Science Requirement</i>	3
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Economics Anthropology
Psychology Political Science
Sociology Geography

<i>Humanities or Social Science Requirement</i>	3
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(Must be from second area)

<i>Natural Science Requirement</i>	4
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Physical Science w/lab **or**
Biological Science w/lab

<i>Open General Education Elective</i>	3
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Required Humanities and Fine Arts Courses 6 cr

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

Elective Courses 21 cr

Art	
AR100 Art Appreciation	3
AR110 Ceramics I	3
AR111 Ceramics II	3
AR112 Ceramics III	3
AR120 Design I	3
AR121 Graphic Design I	3
AR122 Graphic Design II	3
AR126 Two-Dimensional Illustration	3
AR129 Introduction to Digital Photography	3
AR130 Drawing I	3
AR131 Drawing II	3

AR140 Painting I	3
AR141 Painting II	3
AR145 Watercolor	3
AR171 Three-Dimensional Design	3
PT229 Advanced Digital Imaging	3

Communication

CM102 English Composition II	3
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
CM141 Intro to Performance: Off-stage and On	3
CM142 Advanced Performance: Off-stage and On	3
CM143 Play Production	3
CM146 Play Production II	3
CM148 American Cinema Appreciation	3
CM156 Digital Magazine Production: Design and Style	3
CS104 Introduction to Website Design	3
CS107 Graphic Software Applications	3
CS108 Computer Applications	3
CS204 Advanced Website Design/With Lab	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
MU101 American Music	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 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

Fields of Study

HUMANITIES AND FINE ARTS

Associate of General Studies (Con't)

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	Christian Ethics in Contemporary Society	3
RE104	World Religion	3

Other Elective

ED100	Introduction to Education	3
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Life Skills

BE153	Personal Finance	3
BE210	Leadership Development	3
PE141	Personal Wellness	3
PE250	Stress Management	3
SS106	Marriage & Family	3

Open Electives 10 cr



Fields of Study

HUMANITIES AND FINE ARTS

Associate of Arts

62 Hours

Minimum General Education Required Courses 31 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

One from the following area:

- Art
- Music
- Theatre

One from this second area:

- Foreign Language
- History
- Humanities
- Literature
- Philosophy

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

Required Humanities and Fine Arts Courses 6-7cr

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 |
| AR112 | Ceramics III | 3 |
| AR120 | Design I | 3 |
| AR121 | Graphic Design I | 3 |
| AR122 | Graphic Design II | 3 |
| AR126 | Two-Dimensional Illustration | 3 |
| AR129 | Introduction to Digital Photography | 3 |
| AR130 | Drawing I | 3 |
| AR131 | Drawing II | 3 |
| AR140 | Painting I | 3 |
| AR141 | Painting II | 3 |

- | | | |
|-------|--------------------------|---|
| AR145 | Watercolor | 3 |
| AR171 | Three-Dimensional Design | 3 |
| PT229 | Advanced Digital Imaging | 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 | Short Story | 3 |
| CM140 | Theatre Appreciation | 3 |
| CM141 | Introduction to Performance: off-stage and on | 3 |
| CM142 | Advanced Performance off-stage and on | 3 |
| CM143 | Play Production | 3 |
| CM146 | Play Production II | 3 |
| CM148 | American Cinema Appreciation | 3 |
| CM156 | Digital Magazine Production: Design and Style | 3 |
| CS104 | Introduction to Website Design | 3 |
| CS107 | Graphic Software Applications | 3 |
| CS108 | Computer Applications | 3 |
| CS204 | Advanced Website Design/With Lab | 4 |
| 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 |
| MU101 | American Music | 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 |

Fields of Study

HUMANITIES AND FINE ARTS

Associate of Arts (Con't)

Philosophy

PH100	Introduction to Philosophy	3
PH105	Christian Ethics in Contemporary Society	3
RE104	World Religion	3

Other Elective

ED100	Introduction to Education	3
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Open Electives 10 cr



Focus Areas:

Students may explore courses from any of the fields of study to help identify their preferred areas of interest

INTERDISCIPLINARY STUDIES

Division Dean: Dr. Todd Leif
tleif@cloud.edu •• 243.1435, ext. 216



Students with a degree are more competitive for employment opportunities.

Interdisciplinary Studies are designed to allow students the opportunity to explore fields of study or disciplines and use a combination of courses to complete a degree.

The A.A.S. in Technical Studies is available to students who complete technical courses from multiple programs and is considered a “go to work” program that can be completed in two years.

The A.G.S. is a combination of technical courses and transfer courses that could help students be more competitive for employment or apply to a transfer program.

For students who know they want to transfer, the A.S. degree is the best option; however, the general program may not meet the specific requirements of the school of study the student wants to transfer into.

If a student plans to transfer to a Bachelor’s program, it is in the student’s best interest to enroll in the field of study once an area of interest is identified.

DEGREES & CERTIFICATES

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

Fields of Study

INTERDISCIPLINARY STUDIES

Technical Studies Associate of Applied Science 62 Hours

The Associate of Applied Studies 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 15 - 18 cr

Communication Requirement 3-6

Proven English Grammatical Proficiency **or**

CM101 English Composition I (3 cr)

CM115 Public Speaking (3 cr) **or**

Interpersonal Communications (3 cr)

Humanities Requirement (1 area required) 3

Art Humanities

Music Literature

Theatre Philosophy

Foreign Language History

Mathematics Requirement 3

Mathematics General Education Course **or**

MA110 Intermediate Algebra (3 cr)

Natural Science Requirement 3

Physical Science **or**
Biological Science

Social/Behavioral Science Requirement 3

(1 area required)

Anthropology Economics

Geography Psychology

Political Science Sociology

Open Electives 44 - 47 cr



Fields of Study

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 • 243.1435, ext. 221

Employment:

**\$60,000-\$100,000
(with bachelor's
degree)**



Potential Careers:

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

Mathematics is the study of numbers, equations, functions, and geometric shapes and their relationships. Engineering combines mathematical theory, practical design theory, and scientific computing to address today's technological challenges.

While there may be some opportunities for employment after two years, many careers require a Bachelor of Science degree. Students planning to complete a four-year degree should enroll in the A.S. program.

DEGREES & CERTIFICATES

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

Associate of Science A.S. - 62 hours

Fields of Study

MATHEMATICS AND ENGINEERING

Associate of General Studies
62 Hours

Required General Education Courses 25 cr

<i>Communication Requirement</i>	6
CM101 English Composition I (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>	3
(Must be from second area)	
<i>Natural Science Requirement</i>	4
Physical Science w/lab or	
Biological Science w/lab	
<i>Open General Education Elective</i>	3

Required Mathematics and Engineering Courses 13 cr

MA112 Trigonometry	3
MA120 Calculus I	5
MA121 Calculus II	5

Elective Courses 18 cr

Math	
MA122 Calculus III	5
MA123 Differential Equations	4
MA220 Cooperative Education Internship	2

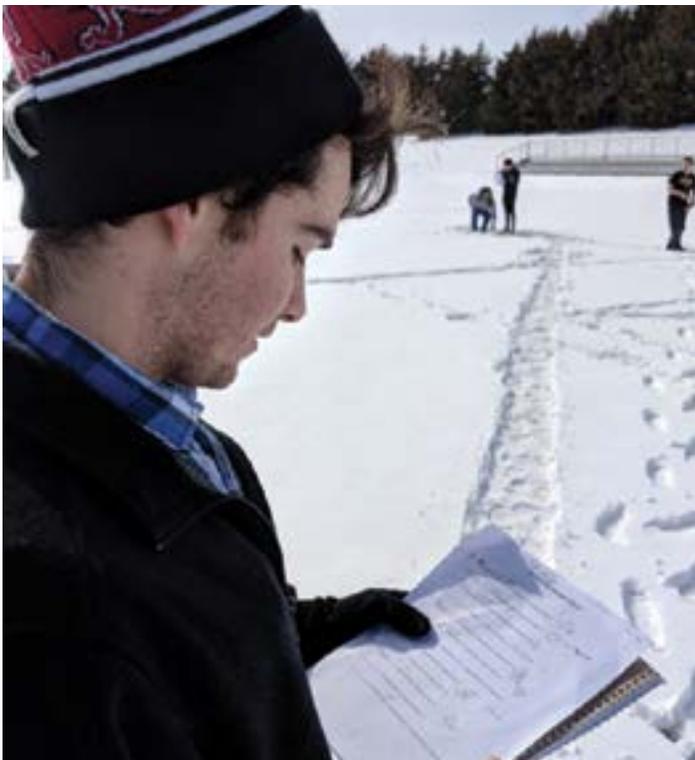
Science	
SC104 Geology	4
SC107 Meteorology	4
SC132 Chemistry II	5
SC134 Organic Chemistry I	5
SC135 Organic Chemistry II	5
SC140 College Physics I	5
SC141 College Physics II	5
SC142 University Physics I	5
SC143 University Physics II	5
SC151 Principles of Biology II	5

Business	
BE100 Introduction to Business	3
BE153 Personal Finance	3
BE160 Business Accounting	3
BE170 Business Statistics	3

Additional Electives	
CS108 Computer Applications	3
CS155 Networking and Computer Technology	3
CA221 Job Search	1
SE100 Intro to Solar Energy	3
UA100 Intro to UAV's	3
WE100 Intro to Wind	3

Life Skills	
BE139 Basic Personal Finance	1
BE210 Leadership Development	3
MG102 Small Business Management	3
PE250 Stress Management	3
SS106 Marriage and Family	3

Open Electives 6 cr



Fields of Study

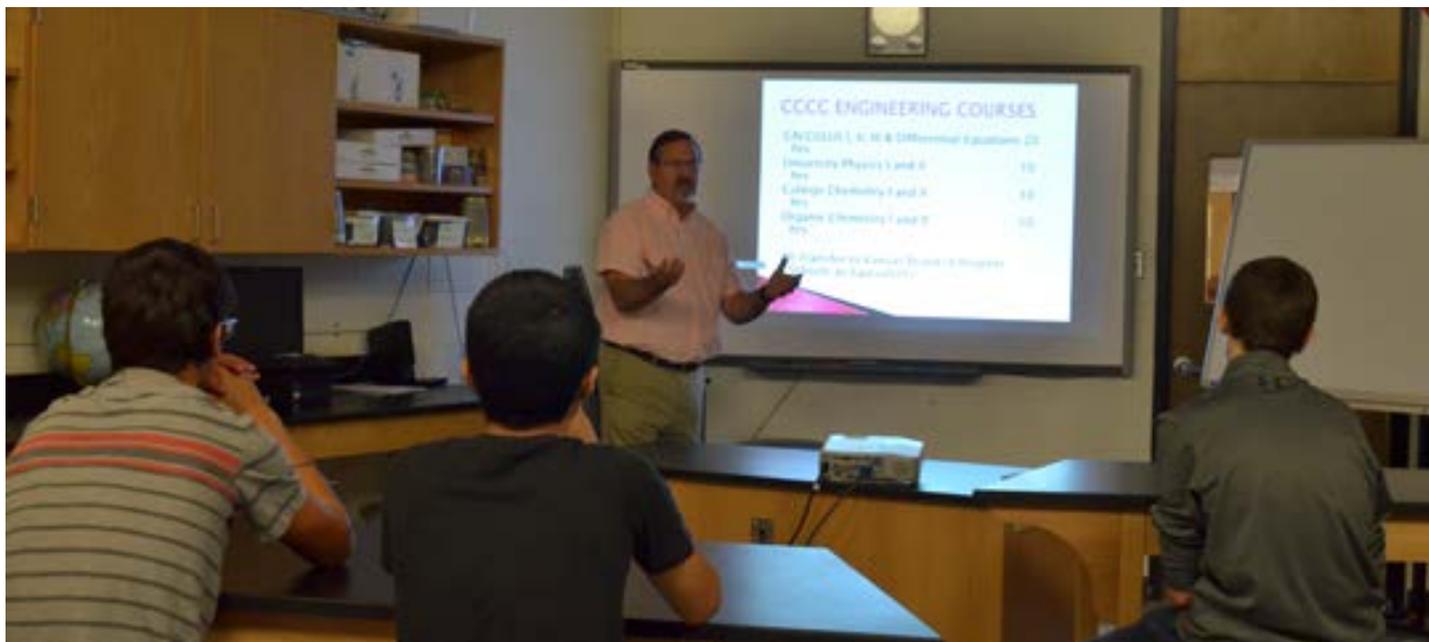
MATHEMATICS AND ENGINEERING

Associate of Science
62 Hours

Required General Education Courses	33 cr	Elective Courses	10 cr
Communication Requirement	9	Math	
CM101 English Composition I (3 cr)		MA122 Calculus III	5
CM102 English Composition II (3 cr)		MA123 Differential Equations	4
CM115 Public Speaking (3 cr) or		MA220 Cooperative Education Internship	1-2
CM240 Interpersonal Communications (3 cr)		Science	
Humanities Requirement (2 areas required)	6	SC104 Geology	4
Art Humanities		SC107 Meteorology	4
Music Literature		SC132 Chemistry II	5
Theatre Philosophy		SC134 Organic Chemistry I	5
Foreign Language History		SC135 Organic Chemistry II	5
Mathematics Requirement	3	SC140 College Physics I	5
Mathematics General Education Course		SC141 College Physics II	5
Natural Science Requirement (2 areas required)	9	SC142 University Physics I	5
SC131 Chemistry I (5 cr)		SC143 University Physics II	5
*Biological Science (4 cr)		SC151 Principles of Biology II	5
<i>*(Physical Science majors should consult their advisor about a substitution of a physical science)</i>		Business	
Social/Behavioral Science Requirement	6	BE100 Introduction to Business	3
EC101 Principles of Macroeconomics (3 cr)		BE153 Personal Finance	3
(1 additional area required) (3 cr)		BE160 Business Accounting	3
Anthropology Geography		BE170 Business Statistics	3
Psychology Political Science		Additional Electives	
Sociology		CS108 Computer Applications	3
		CS155 Networking and Computer Technology	3
		Open Electives	6 cr

Required Mathematics and Engineering Courses 13 cr

MA112 Trigonometry	3
MA120 Calculus I	5
MA121 Calculus II	5



Focus Areas:

Pre-Physical Therapy,
Pre-Chiropractic,
Pre-Med, Pre-Pharmacy,
Pre-Dental Hygiene,
Pre-Dentistry,
Pre-BSN

Employment:

\$45,000-\$200,000

PRE-PROFESSIONAL HEALTH

Stefanie Perret, Nursing Administrator
sperret@cloud.edu •• 243.1435, ext. 332



Potential Careers

- Doctor
- Chiropractor
- Physicians Assistant
- Registered Nurse
- Athletic Trainer

Pre-Professional Health is designed to prepare students for entry into professional schools. A human cadaver lab provides a hands-on study space for students to support classroom learning. The A.S. transfer program is a great starting point for students interested in continuing their studies at a professional school in medicine, dental, or therapy. The A.G.S. program is designed to prepare students to work in supporting roles in the health industry.

DEGREES & CERTIFICATES

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

Associate of Science A.S. - 62 hours

Nursing A.A.S. Generic Track67 hours

Nursing A.A.S. LPN to ADN67 hours

.....19 granted for LPN portfolio

NURSING

The ADN program at Cloud County Community College 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. Cloud County Community College nursing graduates are also prepared to continue studies at colleges or universities that offer bachelor's degrees in nursing. The Associate Degree 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 in Applied Science degree and are eligible to take the licensure examination for registered nurses, NCLEX-RN®.

Contact:

Stefanie N. Perret
Nursing Administrator
785-243-1435 x 332 • sperret@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.

Prerequisite Courses SC126, SS101, SS105, MA110

First Semester: NR111, NR113, SC128

Second Semester: NR112, NR114, CM 101

Third Semester: NR211, NR115, CM115 or CM 240

Fourth Semester: NR 212, Humanities course
*All courses must be completed with a grade of C or better.

Advanced Standing Option

Prerequisite Courses: CM101, MA110, SS101, SS105, SC126, SC128

LPN Program Portfolio - Transfer 19 cr

Summer Session: NR210

First Semester: NR211, NR115, CM115 or CM240

Second Semester: NR212, Humanities course
*All courses must be completed with a grade of C or better.

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 only offered on the Concordia Campus. Nonnursing 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. It must be submitted by August 1. All immunizations and TB test must be current. Documentation of the influenza immunization will be required in the fall.

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. 2015 Supp. 21-6104, 21-6325, 21-6326 or 21-6418, and amendments thereto." --Kansas Nurse Practice Act

CPR certification: Applicants shall provide evidence of current CPR certification at the professional level through the American Heart Association by August 1.

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)
3343 Peachtree Road NE, Suite 500
Atlanta, GA 30326
404-975-5000, fax 404-975-5020

Student Organizations: Student Nurse Association

After Cloud: Employment Opportunities for Registered Nurses, a report prepared by the Kansas Department of Health and Welfare, states that a serious nursing shortage exists in Kansas, and they predicted a deficit of 5,900 Kansas RNs by 2020. Job opportunities are great for Registered Nurses. Graduates from the nursing program are consistently employed at a nearly 100% rate. Registered Nurse Shortages Predicted in the US and Kansas for 2010 and 2020. Retrieved from Kansas Department of Health and Environment. [Http://www.kdheks.gov/ches/](http://www.kdheks.gov/ches/)

Gainful Employment: The salary for new graduates of ADN programs going to work in acute care in Kansas is approximately \$40,500 - \$46,800. Salary will vary by specialty and location.

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.

Fields of Study

PRE-PROFESSIONAL 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
Art Humanities	
Music Literature	
Theatre Philosophy	
Foreign Language History	
<i>Mathematics Requirement</i>	3
MA110 Intermediate Algebra (3 cr) or	
Mathematics General Education Course	
<i>Natural Science Requirement</i>	5
SC126 Anatomy & Physiology (5 cr)	
<i>Social/Behavioral Science Requirement</i>	6
SS101 General Psychology (3 cr)	
SS105 Human Growth & Development (3 cr)	

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
Art Humanities	
Music Literature	
Theatre Philosophy	
Foreign Language History	
<i>Mathematics Requirement</i>	3
MA110 Intermediate Algebra (3 cr) or	
Mathematics General Education Course	
<i>Natural Science Requirement</i>	5
SC126 Anatomy & Physiology (5 cr)	
<i>Social/Behavioral Science Requirement</i>	6
SS101 General Psychology (3 cr)	
SS105 Human Growth & Development (3 cr)	

Required Courses 44 cr

NR113 Pharmacology I	1
NR114 Pharmacology II	2
NR115 Pharmacology III	1
NR111 LifeSpan Nursing I	9
NR112 Life Span Nursing II	9
NR211 Life Span Nursing III	9
NR212 Life Span Nursing IV	9
SC128 Pathophysiology	4

Required Courses 44 cr

NR115 Pharmacology III	1
NR210 LPN to ADN Bridge	2
NR211 Life Span Nursing III	9
NR212 Life Span Nursing IV	9
SC128 Pathophysiology	4
LPN Portfolio	19
LPN prior to enrollment in NR211	

CNA prior to August 1.

Fields of Study

PRE-PROFESSIONAL HEALTH

Associate of General Studies
62 Hours

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)	
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 (Must be from second area)	3
Mathematics Requirement	3
Mathematics General Education Course or MA110 Intermediate Algebra (3 cr)	
Natural Science Requirement	4
SC101 General Biology (4 cr) or SC110 Principles of Biology I (5 cr) or SC130 General Chemistry (5 cr) or SC131 Chemistry I (5 cr)	
Open General Education Elective	3

Required Pre-Professional Health Courses 4 cr

SC120 Human Anatomy & Physiology I (4 cr) or SC126 Anatomy and Physiology (5 cr)

Elective Courses 27 cr

Science	
SC103 Physical Science	5
SC111 Microbiology Lecture	3
SC112 Microbiology Lab	2
SC121 Human Anatomy & Physiology II	4
SC125 Human Body Dissection	1
SC128 Pathophysiology	4
SC132 Chemistry II	5
SC134 Organic Chemistry I	5
SC135 Organic 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 Medication Aide	5

AH163 Emergency Medical Technician	10
BE122 Medical Office Vocabulary	2
BE160 Business Accounting	3
BE170 Business Statistics	3
CA221 Job Search	1
HE124 Nutrition	3
MA107 Medical Mathematics	1
MA114 Elementary Statistics	3
MG102 Small Business Management	3
PE131 First Aid and Safety	3
SC220 Cooperative Education Internship	1-4
SS101 General Psychology	3
SS105 Human Growth & Development	3

Life Skills

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

Open Electives 6 cr



Fields of Study

PRE-PROFESSIONAL HEALTH

Associate of Science
62 Hours

Required General Education Courses 33 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)	
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	

Required Pre-Professional Health Courses 5-8 cr

SC111 Microbiology Lecture (3 cr) and	
SC112 Microbiology Lab (2 cr) or	
SC134 Organic Chemistry I (5 cr) or	
SC120 Human Anatomy & Physiology I (4 cr) and	
SC121 Human Anatomy & Physiology II (4 cr)	

Elective Courses 11-14 cr

Science	
SC103 Physical Science	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
SC128 Pathophysiology	4
SC132 Chemistry II	5
SC134 Organic Chemistry I	5
SC135 Organic 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	
BE122 Medical Office Vocab	2
BE170 Business Statistics	3
HE124 Nutrition	3
MA107 Medical Mathematics	1
MA112 Trigonometry	3
MA114 Elementary Statistics	3
MA115 Linear Algebra and General Calculus	3
MA120 Analytical Geometry and Calculus I	5
MA121 Analytic Geometry and Calculus II	5
PE131 First Aid and Safety	3
SS101 General Psychology	3
SS102 Abnormal Psychology	3
SS105 Human Growth & Development	3

Open Electives 10 cr



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

Employment:
\$36,000-\$67,000

RENEWABLE ENERGY

Department Chair: Kit Thompson
kthompson@cloud.edu • 243.1435, ext. 256



Recent graduates hired as:

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

Renewable Energy is an essential component of a sustainable future. Certificates in wind, solar, substation, or unmanned aircraft vehicles can be completed in a year and form a foundation for two-year “go to work” technician programs. Stacking additional certificates to a two-year program allows students to broaden their training and experience which expands employment opportunities. The college energy park and working substation lab provide hands-on training opportunities for students. Students interested in pursuing a Bachelor’s degree should consider the A.S. program.

DEGREES & CERTIFICATES

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

Fields of Study

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 admittance to Wind Program to enroll in this course or permission from Department Chair.



Fields of Study

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 Writin (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

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

*Must have admittance to Wind Program to enroll in these courses or permission from Department Chair.



Fields of Study

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
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
MG102	Small Business Management	3
SC109	Applied Physics	3
WE100	Introduction to Wind Energy	3
*WE210	Electronics	3
*WE225	Motors, Generators, PLC's	3
*WE230	Substation & Voltage Regulations	3
*WE270	Transformer Theory	3
WE280	Wind Energy Technology Internship	1-4

*Must have admittance to Wind Program to enroll in these courses or permission from Department Chair.



Fields of Study

RENEWABLE ENERGY

Substation Technician

33-Hour Certificate

General Education Required Courses	6 cr	Required Substation Courses	27 cr
<i>Communication Requirement</i>	3	WE105 Employability Skills, Safety, & Blueprint Reading	3
CM101 English Composition I (3 cr) or		WE110 Electrical Theory	3
CM120 Survey of Technical Writing (3 cr) or		WE202 Electrical Power Delivery	3
CM115 Public Speaking (3 cr) or		*WE210 Electronics	3
CM240 Interpersonal Communications (3 cr)		*WE215 Electrical System Protection & Coordination	3
<i>Mathematics Requirement</i>	3	*WE225 Motors, Generators, PLC's	3
MA110 Intermediate Algebra (3 cr) or		*WE230 Substation & Voltage Regulations	3
Mathematics General Education Course		*WE250 Data Acquisition & Communication	3
		*WE270 Transformer Theory	3

*Must have admittance to Wind Program to enroll in these courses or permission from Department Chair.



Fields of Study

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
MA110 Intermediate Algebra or Mathematics General Education Course	

Required sUAS Courses 15 cr

UA100 Introduction to sUAS	3
UA201 sUAS Command, Control, & Comm.	3
UA210 sUAS Systems & Conceptual Design	3
WE110 Electrical Theory	3
WE240 GIS/GPS	3

Elective Courses 9 cr

AG132 Agriculture Management	3
AG255 Precision Ag Hardware	3
AG256 Precision Ag Software	3
AG257 Precision Ag Machine Data Management	3
AG210 Agriculture Advertising & Design	3
AG217 Farm Computer Applications	3
AG220 Cooperative Ed Internships	1-4
AR129 Introduction to Digital Photography	3
AR210 Digital Video Techniques	3
MG102 Small Business Management	3
WE105 Employability Skills, Safety, & Blueprint Reading	3
*WE250 Data Acquisition & Communications	3
WE280 Wind Energy Technology Internship	4

*Must have admittance to Wind Program to enroll in these courses or permission from Department Chair.



Fields of Study

RENEWABLE ENERGY

Wind Energy Technology 33-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
MA110 Intermediate Algebra (3 cr) or Mathematics General Education Course	

Required Wind Energy Courses 27 cr

CS155 Networking & Computer Technology	3
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
*WE230 Substation & Voltage Regulations or WE280 Wind Energy Technology Internship	3
*WE265 Field Training & Project Operations	3

*Must have admittance to Wind Program to enroll in these courses or permission from Department Chair.



Fields of Study

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
MA110 Intermediate Algebra (3 cr) or			*WE250	Data Acquisition & Communications	3
Mathematics General Education Course			Elective Courses		9 cr
<i>Natural Science Requirement</i>		4	BE160	Business Accounting	3
SC107 Meteorology (4 cr) or			BE170	Business Statistics	3
SC137 Natural Hazards and Disasters (3 cr) and			CS108	Computer Applications	3
SC138 Natural Hazards and Disasters (1 cr) or			CS155	Networking and Computer Technology	3
SC146 Environmental Science & Conservation (3 cr) and			MG102	Small Business Management	3
SC147 Environmental Science & Conservation Lab (1 cr)			SC109	Applied Physics	3
<i>Social/Behavioral Science Requirement</i>		3	WE100	Introduction to Wind Energy	3
(1 area required)			*WE225	Motors, Generators, PLC's	3
Economics	Anthropology		*WE230	Substation & Voltage Regulations	3
Psychology	Political Science		*WE270	Transformer Theory	3
Sociology	Geography		WE280	Wind Energy Technology Internship	4

*Must have admittance to Wind Program to enroll in these courses or permission from Department Chair.



Fields of Study

RENEWABLE ENERGY

sUAS (Drones)

Associate of Applied Science
62 Hours

General Education Required Courses		19cr	Required Courses		21 cr
<i>Communication Requirement</i>		6	UA100	Introduction to sUAS	3
CM101 English Composition I (3 cr) or			UA201	sUAS Command, Control, & Comm.	3
CM120 Survey of Technical Writing (3 cr)			UA210	sUAS Systems & Conceptual Design	3
CM115 Public Speaking (3 cr) or			WE110	Electrical Theory	3
CM240 Interpersonal Communication (3 cr)			WE240	GIS/GPS	3
<i>Humanities Requirement (1 area required)</i>		3	*WE250	Data Acquisition and Communications	3
Art	Humanities		WE255	Airfoils and Composite Repair	3
Music	Literature		Elective Courses		
Theatre	Philosophy				22 cr
Foreign Language	History		AG132	Agriculture Management	3
<i>Mathematics Requirement</i>		3	AG255	Precision Ag Hardware	3
MA110 Intermediate Algebra (3cr) or			AG256	Precision Ag Software	3
Mathematics General Education Course			AG257	Precision Ag Machine Data Management	3
<i>Natural Science Requirement</i>		4	AG210	Agriculture Advertising & Design	3
Science Gen Ed Course			AG217	Farm Computer Applications	3
SC107 Meteorology (4 cr) recommended			AG220	Cooperative Ed Internships	1-4
<i>Social/Behavioral Science Requirement</i>		3	AR129	Introduction to Digital Photography	3
<i>(1 area required)</i>			AR210	Digital Video Techniques	3
Economics	Anthropology		MG102	Small Business Management	3
Psychology	Political Science		WE105	Employability Skills, Safety, & Blueprint Reading	3
Sociology	Geography		WE280	Wind Energy Technology Internship	4

*Must have admittance to Wind Program to enroll in these courses or permission from Department Chair.



Fields of Study

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
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 45 cr

CS155 Networking & Computer Technology	3
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 Regulations or WE280 Wind Energy Technology Internship	3-4
*WE250 Data Acquisition & Communication	3
WE255 Airfoils and Composite Repair	3
WE260 Wind Turbine Siting or WE240 GIS/GPS	3
*WE265 Field Training & Project Operations	3
*WE270 Transformer Theory	3

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

*Must have admittance to Wind Program to enroll in these courses or permission from Department Chair.



Fields of Study

RENEWABLE ENERGY

Associate of General Studies
62 Hour

Required General Education Courses 25 cr

Communication Requirement 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)

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

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 | Introductin 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 | Prinicples of Macroeconomics | 3 |
| EC102 | Principles of Microeconomics | 3 |
| MG101 | Management Principles | 3 |
| MG102 | Small Business Management | 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 | .5 |
| 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 | UAS Systems & Conceptual Design | 3 |
| WE102 | Energy Industry Fundamentals | 3 |
| WE105 | Employability Skills, Safety, & Blueprint Reading | 3 |
| WE120 | Hydraulics | 3 |
| WE130 | Wind Public/Landowner Relations | 3 |
| WE150 | Mechanical Systems | 3 |
| WE202 | Electrical Power Delivery | 3 |
| WE205 | Wind Business | 3 |
| *WE210 | Electronics | 3 |
| *WE215 | Electrical System Protection and Coordination | 3 |
| *WE220 | Cooperative Education 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 |
| WE260 | Wind Turbine Siting | 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 |
| SC146 | Environmental Science and Conservation | 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 admittance to Wind Program to enroll in these courses or permission from Department Chair.

Fields of Study

RENEWABLE ENERGY

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</i>	8
SC146 Environmental Science & Conservation (3 cr) and	
SC147 Environmental Science & Conservation Lab (1 cr)	
SC107 Meteorology (4 cr)	
<i>Social/Behavioral Science Requirement (2 areas required)</i>	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 Small Business Management	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
WE255 Airfoils & Composite Repair	3
WE240 GIS/GPS	3

Additional Electives

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

Open Electives 6 cr

*Must have admittance to Wind Program to enroll in these courses or permission from Department Chair.



Focus Areas:

Biology, Chemistry,
Physical Science,
Physics

SCIENCE

Department Chair: Dr. Craig Lamb
clamb@cloud.edu •• 243.1435, ext. 717

Employment:

\$35,000-\$200,000



Potential Careers:

- Environmental Scientist
- Wildlife/Field Biologist
- Doctor, Dentist, Chiropractor
- Brewmaster/Distiller
- Conservation Officer

Science builds and organizes knowledge in the form of testable explanations and predictions. Students can select an area of science based on interest: the study of life and living organisms; the origin, history and structure of the earth; properties, reactions, and the structure of matter; or matter and energy. There are some opportunities for employment after two years, many careers require a Bachelor of Science degree.

Students planning to complete a four-year degree should enroll in the A.S. program.

DEGREES & CERTIFICATES

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

Associate of Science A.S. - 62 hours

Fields of Study

SCIENCE

Associate of General Studies
62 Hours

Minimum General Education Required Courses 25 cr

<i>Communication Requirement</i>	6
CM101 English Composition I (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>	3
(Must be from second area)	
<i>Natural Science Requirement</i>	4
Physical Science w/lab or	
Biological Science w/lab	
<i>Open General Education Elective</i>	3

Physical Sciences

MA112 Trigonometry	3
MA120 Analytical Geometry and Calculus	5
SC104 Geology	4
SC105 Astronomy	4
SC107 Meteorology	4
SC131 Chemistry I	5
SC132 Chemistry II	5
SC134 Organic Chemistry I	5
SC135 Organic Chemistry II	5
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
SC146 Environmental Science and Conservation	3
SC147 Environmental Science and Conservation Lab	1

Agri-Bio Technology

AG108 Environmental Quality	3
AG109 Environmental Quality Lab	1
AG160 Introduction to Biotechnology	3
AG236 Molecular Biology for Agribiotechnology	4
AG237 Integrated Organic and Biochemistry for Agri-Technology	5
AG250 Introduction to Genetic Engineering	4

Life Skills

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

Required Science Courses 9 cr

SC130 General Chemistry (5 cr) or	
SC131 Chemistry I (5 cr)	
Physical Science General Education Course (4 cr)	

Elective Courses 18 cr

Biological Science	
MA114 Elementary Statistics	3
SC101 General Biology	4
SC103 Physical Science	5
SC110 Principles of Biology I	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
SC199 General Zoology	5

Open Electives 10 cr

CLOUD COUNTY
Start Here

Fields of Study

SCIENCE

Associate of Science

62 Hours

Required General Education Courses 34 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 (2 areas required)</i>	10
SC131 Chemistry I (5 cr)	
SC112 Principles of Biology (5 cr)	
<i>Social/Behavioral Science Requirement (2 areas required)</i>	6
Economics Anthropology	
Psychology Political Science	
Sociology Geography	

Required Science Courses 10 cr

Two from the following:

SC132 Chemistry II	5
SC140 College Physics	5
SC141 College Physics II	5
SC142 University Physics	5
SC143 University Physics II	5
SC151 Principles of Biology II	5

Elective Courses 10 cr

Biological Science

SC103 Physical Science	5
SC110 Principles of Biology I	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
SC199 General Zoology	5

Math

BE170 Business Statistics	3
MA112 Trigonometry	3
MA114 Elementary Statistics	3
MA120 Analytical Geometry and Calculus	5
MA121 Calculus II	5
MA122 Calculus III	5
MA123 Differential Equations	4

Physical Sciences

AG108 Environmental Quality	3
AG109 Environmental Quality Lab	1
SC103 Physical Science	3
SC104 Geology	4
SC105 Astronomy	4
SC107 Meteorology	4
SC131 Chemistry I	5
SC132 Chemistry II	5
SC134 Organic Chemistry I	5
SC135 Organic Chemistry II	5
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
SC146 Environmental Science and Conservation	3
SC147 Environmental Science and Conservation Lab	1

Open Electives 8 cr



Focus Areas:

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

Employment:

\$40,000-\$70,000

SOCIAL SCIENCES

Department Chair: Kristina Frost
kgfrost@cloud.edu •• 243.1435, ext. 265



Potential Careers:

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

Social Science is the study of human society and the manner in which people behave and influence the world around us. While there are some opportunities for employment after two years, many careers require a bachelor of science degree. Students planning to complete a four-year degree should enroll in the A.A. program.

DEGREES & CERTIFICATES

Associate of General Studies.....62 hours

Associate of Arts.....62 hours

Fields of Study

SOCIAL SCIENCE

Associate of General Studies

62 Hours

Required General Education Courses 24 cr

<i>Communication Requirement</i>	6
CM101 English Composition I (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>	3
(Must be from second area)	
<i>Natural Science Requirement</i>	4
Physical Science w/lab or	
Biological Science w/lab	
<i>Open General Education Elective</i>	3

Required Social Science Courses 6 cr

SS105 Human Growth and Development	3
SS106 Marriage and Family	3

Elective Courses 26 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 Ops and Proc	3	
AJ205 Criminology	3	
AJ206 Criminal Law	3	
AJ207 Criminal Procedures	3	
AJ209 Juvenile Delinquency and Justice	3	
AJ210 Criminal Investigations	3	
AJ211 Criminal Justice Interview & Report Writing	3	
AJ225 Ethics in Criminal Justice	3	
AJ220 Cooperative Ed Internship	3	
AJ298 Kansas Law Enforcement Training Transfer	12	
Social Science		
EC101 Principles of Macroeconomics	3	
EC102 Principles of Microeconomics	3	
GE101 Geography	3	
SS102 Abnormal Psychology	3	

SS103 Social Psychology	3
SS106 Marriage and Family	3
SS107 Human Sexuality	3
SS125 Introduction to Cultural Anthropology	3
SS127 Child Psychology	3
SS129 Introduction to Social Work	3
SS130 Introduction to Sociology	3
SS131 Race and Ethnic Relations in the U.S.	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

Additional Electives

CA221 Job Search	1
FL111 Spanish I	4
HE124 Nutrition	3
MA114 Elementary Statistics	3
MG102 Small Business Management	3
SC104 Geology	4
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
SS201 Social Problems	3
SS220 Cooperative Ed Internship	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



Fields of Study

SOCIAL 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 (2 areas required)</i>	6
SS101 General Psychology (3 cr)	
SS130 Introduction to Sociology (3 cr) or	
SS201 Social Problems (3 cr)	
<i>Open General Education Elective</i>	3

SS125	Introduction to Cultural Anthropology	3
SS127	Child Psychology	3
SS129	Introduction to Social Work	3
SS130	Introduction to Sociology	3
SS131	Race and Ethnic Relations in the U.S.	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

FL111	Spanish I	4
HE124	Nutrition	3
MA114	Elementary Statistics	3
SC104	Geology	4
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

Open Electives 7 cr

Required Social Science Courses 6 cr

SS105	Human Growth and Development	3
SS106	Marriage and Family	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
AJ205	Criminology	3
AJ206	Criminal Law	3
AJ207	Criminal Procedures	3
AJ209	Juvenile Delinquency and Justice	3
AJ210	Criminal Investigations	3
AJ225	Ethics in Criminal Justice	3
AJ220	Cooperative Ed Internship	3

Social Science

EC101	Principles of Macroeconomics	3
EC102	Principles of Microeconomics	3
GE101	Geography	3
SS102	Abnormal Psychology	3
SS103	Social Psychology	3
SS107	Human Sexuality	3



Course Descriptions

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

AGRICULTURE

*AG101 PLANT 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: Plant 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.

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.

AG116 PRINCIPLES OF FEEDING3

This course applies basic nutrition principles to the feeding of livestock, evaluation of feedstuff, and formulating rations through practical feeding problems. Special emphasis is given to anatomical and physiological differences as they affect the use of particular feedstuffs for each species while applying the theory of practical economy. This course combines lecture and lab.

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.

***AG127 AGRICULTURE SCIENCE FOR AGRI-BIOTECHNOLOGY.....4**
 This class is designed to provide students with a background in biotechnology laboratory techniques and practices in the context of plant and animal systems. Topics will include differences between prokaryotic and eukaryotic cells, differences between plant and animal cells, and basic plant biology. This class will demonstrate common laboratory equipment sequencing, isolation, and amplification (PCR).

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.

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.

***AG139 FARM ANIMAL REPRODUCTION.....4**
 Is designed to teach basic anatomy and physiology of reproduction in the domestic animal species. This course will include current reproductive management techniques to give students both a scientific and applied knowledge of livestock reproduction. Field trips and hands-on experience are an integral part of this course.

***AG147 LAB METHODS IN AGRI-BIOTECHNOLOGY.....4**
 This class will teach students to perform skills necessary for employment in the biotechnology industry. Students will be introduced to techniques for preparing laboratory reagents and solutions including culture media and buffers, measuring, precision pipetting, preparing and running DNA and protein gel electrophoreses experiments, separating proteins using chromatography methods, examining and manipulating DNA including DNA fingerprinting, restriction enzyme digests, and PCR, and using math calculations to prepare solutions and calculate pH. Students will learn how to use Excel to create standard curves for estimating protein and DNA concentrations. A unit on basic statistical analysis will be included to support data collection, producing data via experiments, creating distributions, using scatter plots and correlations, and conducting tests of significance.

***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.

AG155 COMPARATIVE AGRICULTURE.....1
 This course is designed to expose students to leading producers, members, management practices, and philosophies of various agricultural industries at various locations. This is a travel-based course where students visit sites and meet with management and employees of various sectors at various locations of the industry.

Course Descriptions

AG157 EQUINE INDUSTRY MANAGEMENT I.....3

Helps to acquaint equine management students with basic concepts involved in operating a day to day equine enterprise. This class will stress business issues and principles involved in an economically successful enterprise.

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.

***AG160 INTRODUCTION TO BIOTECHNOLOGY3**

Is designed to introduce and acquaint students with the use of biotechnology in agriculture today and its applications in the near future. The class will cover aspects in the areas of genetically modified organisms (GMOs), transgenic animals, cloning, and the bovine, ovine, and porcine genome projects, and genetic identification and screening of replacement animals. (Dual listed with science)

***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 nutritional requirements; and the theory of practical economy for the maintenance and growth of farm animals.

AG170 WILDLIFE MANAGEMENT3

Is designed to introduce students to scientific principles that will enable them to manage land in a manner that will enhance wildlife populations and to defend the proper use of science in wildlife management.

***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.

AG190 MARKETING THE EQUINE INDUSTRY3

This class is designed to expose students to advertising and marketing principles, as well as provide them with real life experience. The class will be involved in hands on projects in marketing and advertising. Students will sell advertising space, create ads, and publish marketing materials.

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

***AG224 COMPARATIVE AGRICULTURE II 1-4**

This course is a continuation of AG155 Comparative Agriculture and is designed to expose students to leading producers, members, management practices, and philosophies of various agricultural industries at various locations. This is a travel-based course where students visit sites and meet with management and employees of various sectors at various locations of the industry.

Course Descriptions

***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.

AG236 MOLECULAR BIOLOGY FOR AGRI-BIOTECHNOLOGY.....4
Molecular Biology engages the biotechnology student with investigations into the molecular and biochemical nature of cells. Study begins with the biochemical foundations of life and focuses on the central dogma of molecular biology (DNA replications, transcription, and translation). Students will build on techniques learned in previous courses and will gain increased proficiency with techniques involving the manipulation of DNA. Prerequisite: General Biology or Principles of Biology, General Chemistry or Chemistry I, Introduction to Biotechnology, Lab Methods in Agri-Biotech.

***AG237 INTEGRATED ORGANIC AND BIOCHEMISTRY FOR AGRI- BIOTECHNOLOGY.....5**
This course is designed for students in the Agri-Biotechnology program. It is an integrated organic and biochemistry course that emphasizes the practical aspects of organic chemistry and biochemistry necessary for the comprehension of biotechnical processes. Prerequisite: General Chemistry with a C or better.

***AG240 THE HORTICULTURE INDUSTRY3**
This course is designed to provide instruction and hands-on activities for the development of skills, competencies, and understanding needed for successful employment in the production, sales, and marketing aspects of the horticulture industry.

***AG241 COMMERCIAL PRODUCTIONS OF FRUITS & VEGETABLES.....3**
This course will cover the principles and practices of successful commercial fruit and vegetable production with an emphasis on environmentally friendly production techniques to maximize yield

and quality. Topics covered will include crop growth requirements and growth patterns, alternative production techniques, harvesting, and storage.

***AG250 INTRODUCTION TO GENETIC ENGINEERING4**
This course is designed to provide students with a background in Biotechnology laboratory techniques and practices. This class will demonstrate and teach common laboratory equipment and protocols involved with DNA restriction digestion and analysis, cloning, expression, sequencing, isolation, and amplification (PCR). The class will demonstrate the use of plasmids in cloning and express, along with RNA isolation, purification, and measurement by quantitative r-PCR. Prerequisites: General Biology or Principles of Biology, General Chemistry or Chemistry I, and Lab Methods in Agri-Biotech.

***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.

***AG257 PRECISION AG MACHINE DATA MANAGEMENT..3**
Students will learn how to collect, manage, and retrieve financial, physical, and spatial data from farm operations to support a farm's decision-making and reporting processes. This course will emphasize the use of financial, statistical and logical spreadsheet functions, GIS systems, record-keeping for fertilizer and pesticide usage and regulation, and specialized software applications, including integration of information from various sources and packages.

AG299 CDL: MAPS, LOG BOOKS, AND D.OT. REGULATIONS1

This course is Phase I of the CDL and will provide the information necessary for the student to successfully take the CDL general knowledge, combination vehicle and air brake written tests. Upon passing these tests, which are administered by the State of Kansas, you will receive your CDP (Commercial Driving Permit) which allows the student to drive with the instructor.

AG300 COMMERCIAL DRIVER'S LICENSE1
This course is the beginning part of Phase 2 of the CDL and continues with class room training along with placing the student in the driver's seat of a tractor /trailer combination vehicle with air brakes preparing for the three part Driving Skills Examination. Topics covered will include: pre-trip inspections, basic vehicle control skills (Closed Course) and on-road driving. Must be taken concurrently with AG301.

Course Descriptions

AG301 TRUCK AND TRACTOR TRAILER VEHICLE INSPECTION AND MAINTENANCE.....1

This course is the second part of Phase 2 and is designed to guide students to quickly and accurately read a commercial atlas and plan trips in accordance with D.O.T. rules and regulations. Students will learn hours of service regulations, how to maintain log books, and other record-keeping requirements. Other D.O.T. rules and regulations will be discussed with emphasis on recent changes. Must be taken concurrently with AG300.

AG302 IN CITY COMMERCIAL DRIVER'S LICENSE DRIVING.....1

Is designed to give simulated practice of driving in city situations. Done in a parking lot, the students will practice right and left turns, backing, and backing into a dock or elevator. A portion of the practice will be done after dark to practice in low light situations.

* 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.

AH101 SPECIAL TOPICS IN HEALTH CARE.....1

Has been developed to acquaint mental health, educators, child care and health care professionals with significant family issues of the day. It is broken into four separate, yet interrelated sessions. Upon completing this seminar, participants will have the understanding to provide meaningful intervention in each of these problematic family components.

AH104 PAID NUTRITION ASSISTANT 1/2

Will provide training for individuals who are paid to feed residents of an adult care home following state guidelines and regulations.

AH109 INTRODUCTION TO HEALTHCARE PROFESSIONS.....3

This course is designed to introduce the student to the variety of career occupations in the healthcare profession. The student will learn specific roles and responsibilities of different healthcare professions, explore the legal and ethical issues associated with the United States' healthcare system, understand the importance of confidentiality and patient documentation, and participate in clinical shadowing experiences with area healthcare providers.

AH110 HEALTH UNIT COORDINATOR.....4

This course is designed to prepare the health unit coordinator student to facilitate the activities of people in a health unit to work together smoothly and harmoniously in a common action, which is the delivery of health care to patients. Students will learn management of information, communication, medical terminology, critical thinking and cultural diversity. Students will learn to transcribe physician orders. Students with skills in health unit coordinating will be prepared to work in a variety of health care settings.

SOCIOLOGICAL GERONTOLOGY MODULES

AH151 ACTIVITIES PROGRAMS IN THE NURSING HOME2

Assists the Nursing Home Administrators in defining the role of the Activities Director and the component parts of coordinating that program with the total restorative services provided to the resident.

AH153 THE SOCIAL SERVICES DESIGNEE ROLE IN THE ADULT CARE FACILITY2

Is an introductory course covering the role of the Social Service Designee in the Adult Care Facility.

AH157 INTRODUCTION TO THE HELPING ROLE IN THE LONG TERM CARE FACILITY1

Presents historical and current perspectives of the "helping" concept, especially in the field of Long Term Care and Adult Care Home settings. Through lecture, discussion and role playing, based upon written and audio-visual materials, participants have an opportunity to learn about the helping component of social services and recreational programming. Participants will also learn specific tasks they must perform in order to meet more effectively the needs of residents and families. Both theoretical and practical aspects of helping are presented, with specific application to those skills the SSD and AD require for effective functioning as a helper.

AH160 ADULT CARE HOME OPERATOR COURSE2

This course will prepare the student to be an operator of assisted facilities, residential health care facilities, home plus or adult day care facilities. After successful completion of the course, the student is eligible to take the state exam prepared by Kansas Department of Health and Environment on the principles of assisted living.

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

Course Descriptions

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.

AH171 EMERGENCY MEDICAL TECHNICIAN - INTERMEDIATE.....7

The Emergency Medical Technology program is based on the National Registry Emergency Medical Technician - Intermediate curriculum. It provides training in anatomy and physiology, medical terminology, emergency and assessment of patient conditions, emergency treatment protocol, and legal and ethical standards established for emergency medical care. The Emergency Medical Technology program is intended to produce graduates who are prepared and eligible to take the Kansas Registry EMT-Intermediate certificate examination. Graduates will be competent in the basic skills necessary to assess and treat both pre-hospital medical and traumatic injuries. A variety of clinical and lab experiences are planned to integrate theory and practice. Prerequisite: EMT or EMT-Basic certification. Must be AHA Health Care Provider CPR certified.

AH178 PHARMACY TECHNICIAN LICENSING PREP 10

This course offers a comprehensive introduction to the knowledge and skills pharmacy technicians need for successful practice. Key areas of concentration include the role of the pharmacy technician in the pharmacy setting, an overview of medications used to treat specific body systems, a breakdown of the different classifications of drugs, and a review of the basic sciences at the core of pharmacy practice. It also offers helpful PTCB examination review, as well as information on career opportunities for pharmacy technicians with advice on getting a job and advancing in the profession.

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 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.

AH184 EMT TRANSITION2

This course is designed to bridge existing Kansas certified emergency medical technicians to the new scope of practice as approved by Kansas for emergency medical technicians. The course is built and delivered on the foundation of existing knowledge for the Kansas emergency medical technician. Successful completion of this course is required in order to bridge to the new level of certification as defined by the Kansas EMS scope of practice.

AH190 ADVANCED EMT 13

The AEMT I course is the first in a two-course sequence: AEMT I and AEMT II. 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.

AH191 ADVANCED EMT II..... 15

The AEMT II course is the second in a two-course sequence: AEMT I and AEMT II. 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)

Course Descriptions

instruction, practical skills training, clinical experience in a hospital setting, and field experience with a mobile intensive care unit. Prerequisite: current EMT certification; must be CPR/AED certified by the American Heart Association at the Health Care Provider level; must have completed AEMT I with a C or better.

AH197 CERTIFIED NURSE AIDE5
Upon successful completion of the 90 Hour Certified Nurse Aide course, the student must take a state exam. Successful passing of the exam will result in the receipt of a C.N.A. license from the State of Kansas. Course delivery methods may be completed by face-to-face classroom sessions, (45 hours of classroom/45 hours of clinical), or hybrid. The hybrid delivery method requires the student to complete 45 hours classroom instruction via online and 45 hours clinical per the Kansas Department for Aging and Disability Services. The 90 Contact Hour Certified Nurse Aide Curriculum and Guidelines are fully implemented. (K.A.R. 26-50-10). This course is considered a Stand Alone Program and is not applicable to any degree

AH198 MEDICATION AIDE5
Upon successful completion of the Certified Medication Aide course, the student must take a state exam. Successful passing of the state exam will result in the receipt of a Certified Medication Aide license from the State of Kansas. Course delivery methods may be completed by face-to-face classroom sessions, (50 hours of classroom/25 hours of clinical), or hybrid. The hybrid delivery method requires the student to complete 50 hours of instruction via online and 25 hours of clinical per the Kansas Department for Aging and Disability Services. The 75 Contact Hour Certified Medication Aide Curriculum and Guidelines are followed. For authorizing statute for Certified Medication Aides in the KS Nurse Practice Act, See: K.S.A. 65-1124 (1) at (www.ksbn.org). This course is considered a Stand Alone Program and available only to Certified Nurse Aides and is not applicable to any degree.

AH207 CERTIFIED NURSE AIDE REFRESHER1
The C.N.A. in Kansas is required to work at least eight hours every two years for the C.N.A. license to remain active. The C.N.A. Refresher Course is designed to offer inactive C.N.A.'s an opportunity to refresh their skills and obtain current information concerning the care of the elderly in long-term care. Students will discuss the nurse aide's responsibility in the current health care system and the importance of residence rights. The students will demonstrate safety measures, infection control procedures, personal care skills, measurement of vital signs, transfers, positioning, and turning. Students enrolled in the refresher course must show proof of certification as a Kansas C.N.A. by providing a copy of their card prior to the first class session. Upon completion of this course, the status of C.N.A. becomes "active" and the individual has the opportunity to work as a C.N.A. again.

AH211 INTRAVENOUS THERAPY FOR LPN'S3
Prepares licensed practical nurses to perform activities as defined in K.A.R. 60-16-102, and according to rules and regulations set forth by the Kansas State Board of Nursing.

AH310 HOME HEALTH AIDE2
Is designed to prepare participants to become Certified Home Health Aides in Kansas utilizing the Kansas Department for Aging and Disability Services curriculum and guidelines.

AH400 ICD9CM CODING.....3
Is used for classification of diagnosis and procedures in the hospital, physician clinics, long-term care facilities, home health agencies, insurance companies, and other medical service providers. This course is a basic beginners coding course.

AH401 ICD9CM ADVANCED CODING3
Is designed for students who need advanced training on ICD9CM coding procedures.

AH402 CPT-HCPCS AMBULATORY CODING3
Is designed to train out-patient facility staff (i.e. home health agencies, physician offices) ICD9CM diagnostic coding and CPT/HCPCS procedural coding for reimbursement purposes.

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.

AJ104 FUNDAMENTALS OF PRIVATE SECURITY3
The course presents the latest in security issues from security equipment and design theory to security management practice. Homeland Security in the United States; terrorism as it relates to: cargo and travel security, potential areas of attack and target hardening techniques; and the use of current technologies to combat new threats are discussed. Changing roles of traditional physical and guard security are examined in light of the advances in the electronic and computer security. Areas such as biometric security, access control, CCTV surveillance advances, as well as the growing computer security issues of identity theft and computer fraud are covered.

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

Course Descriptions

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.

AJ117 CONSTITUTIONAL LAW.....3
Will introduce the student to the U.S. Constitution and its impact upon the criminal justice system. The course will preview the Articles that establish the formation of the federal government and the balance of power. It will also preview the Amendments to the U.S. Constitution and their impact upon society. It will examine the decisions of the U.S. Supreme Court and the impact of those decisions on our legal system.

AJ121 INTRODUCTION TO PUBLIC ADMINISTRATION ..3
Examines the organization and administrative activities of government in carrying out public policy. Students will study the basics of public policy management, administrative functions, organization, accountability, finance, and personnel issues as they arise in a government or other public institution.

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.

AJ150 LAW OFFICE MANAGEMENT.....3
Examines the management of a modern law office with an emphasis on management principles, legal structure, filing and record keeping, attorney-client relationship, billing systems and procedures. This course also explores accepted methods of accounting, inventory control, marketing, and personnel management as it relates to the law office. A special section has been added to address the issues associated with law office technology.

AJ151 INTRODUCTION TO LAW3
Introduces students to the American Legal System and its many components. The course examines the civil, criminal, and administrative systems as well as explores the different jobs and participants in the system. Students learn about the structure of the courts, the methods for making law, and the acceptable means for prosecuting and defending a civil and criminal action.

AJ154 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. (Dual listed with Business)

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.

Course Descriptions

***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.

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

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 JUSTICE3

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.

AJ230 CRIME PREVENTION3

This course is designed to introduce the student to several environmental settings, including major event facilities, small retail establishments, downtown streets, residential areas, and playgrounds. The concepts presented in this book explain the link between design and human behavior. Understanding this link can enable a planner to use natural environmental factors to minimize loss and crime and to maximize productivity. Explanations of criminal behavior and the historical aspects of design teach both the novice and the expert in crime prevention how to use the environment to affect human behavior in a positive manner.

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.

Course Descriptions

***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 Two-Dimensional Design, 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.

***AR126 TWO-DIMENSIONAL ILLUSTRATION +3**

Two-Dimensional Illustration is an introductory drawing course where students will 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.

***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.

Course Descriptions

***AR171 THREE-DIMENSIONAL DESIGN +3**
 Three-Dimensional Design is a basic level course beneficial to students in fine arts, commercial art, architecture, education, child care and interior design. It is structured around the basic organization of visual communication. The students will have hands on experiences dealing with the elements and principles of three-dimensional design and will have opportunities to create portfolio pieces. The four and one-half hour 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 COMMUNICATIONS3
 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.

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. (Dual listed with Administration of Justice)

BE139 BASIC PERSONAL FINANCE1
 This course focuses on basic skills in personal financial management with an emphasis on basic money management including budgeting, controlling debt, bank accounts, borrowing, credit cards, investments, and retirement. Practical knowledge and application of these areas are stressed.

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.

Course Descriptions

BE160 BUSINESS ACCOUNTING3

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 I3

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 II3

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.

BE163 FINANCIAL ACCOUNTING4

A comprehensive introduction of financial accounting fundamentals. This course focuses on the accounting cycle, preparation and analysis of financial statements as per U.S. GAAP, the valuation of assets and liabilities, an introduction of fair value accounting, an introduction of IFRS, and the quality of business decisions in an ethical context.

BE164 MANAGERIAL ACCOUNTING3

An introduction of managerial accounting fundamentals. This course focuses on applying the management accounting techniques of planning and controlling operations including: master and capital budgets, variance analysis, cost-volume-profit analysis, cost allocation, and evaluating the ethical dimensions of managerial accounting. Pre-requisite: Final grade of a C or better in BE162 Accounting II or BE163 Financial Accounting.

BE165 COMPUTERIZED ACCOUNTING3

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 ACCOUNTING3

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.

BE172 CUSTOMER SERVICE3

This course provides how-to topics for the customer service professional and includes the concepts and skills needed for success in business careers, including listening techniques, verbal and nonverbal communication, and use of technology. The course will focus on the needs and requirements of internal and external customers, the enhancement of customer relationships, the significance of market research with respect to the customer, the design and redesign of customer service strategies, and differentiate between internal and external customers in a service and manufacturing organization. Emphasis is given to dealing with customer service problems and how to handle conflicts and stress.

BE185 HUMAN RESOURCE MANAGEMENT3

An examination of the employment process, international challenges, current and recurring issues. Emphasis on evaluation, interviewing, training, and labor relations

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 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 DEVELOPMENT3

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

Course Descriptions

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

Cooperative Education Internships enhance the academic background of the student with a curriculum related on-the-job work experience. These experiences may be completed by working while attending school or by working during the summer. College personnel will assist in matching employers and students in this program which is committed to the growth of the student. Cooperative Education is a valued partnership between employers, students, and educators. Students must 1) already be enrolled in at least 12 credit hours at CCC or is in the process of completing coursework; 2) employed or work with college personnel to find a placement related to the curriculum they are enrolled in; 3) complete the necessary enrollment process which includes paying the tuition to be able to earn college credits; and 4) be a U.S. citizen or prove immigration eligibility to accept a work assignment.

CA221 JOB SEARCH 1

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.

COMMUNICATIONS

CM067 BASIC ESL WORKSHOP 3

Basic ESL Workshop is an applied course for the development of reading, writing, listening, and speaking skills for low beginning (Level 1) English Language Learners (ELLs) whose native language is not 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. Co-requisite: To create an immersive language experience, students enrolled in the Basic ESL Workshop are co-enrolled in Basic ESL I.

CM069 BASIC ESL I 5

Basic ESL is designed for low beginning (Level 1) English Language Learners (ELLs) whose native language is not English. Class will provide skills needed to use English successfully and appropriately in a variety of community, workplace and/or academic settings. Instructional activities will focus on four target areas: listening, speaking, reading, and writing. The course helps students develop their grammar and writing skills in preparation for subsequent English courses.

CM070 BASIC ESL II 5

Basic ESL II is designed for high beginning (Level 2) English Language Learners (ELLs) whose native language is not English. Class will provide skills needed to use English successfully and appropriately in a variety of community, workplace and/or academic settings. Instructional activities will focus on four target areas: listening, speaking, reading, and writing. The course helps students develop their grammar and writing skills in preparation for subsequent English courses.

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 TRAINING 1

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

Course Descriptions

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. (This course, or derivations of this course, may be offered as part of a pilot study).

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 an emphasis in writing and rewriting. Assigned readings, argument and persuasion, literary analysis (poetry, fiction, drama), and research are included. Prerequisite: English Composition I.

CM106 CREATIVE WRITING I3

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.

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 II.....3

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.

Course Descriptions

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

CM129 MEDIA LAW AND ETHICS.....3

Media Law and Ethics is designed to instill a greater appreciation for freedom of expression, provide an overview of the diverse field of communications law, and impart a functional understanding of the legal rules and principles that are generally relevant to journalism and mass communication professionals in the U.S.

CM136 MASS COMMUNICATIONS SOFTWARE3

An 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.

CM137 INTRODUCTION TO MULTIMEDIA COMMUNICATIONS.....3

This course is an introduction to reporting and storytelling through a combination of mass communication mediums including radio, print, web, visual, and social media. Students will apply the concept of “media convergence”, the synthesis of multiple modes of media, to communicate dynamic and coherent messages. This course offers extensive hands-on experience using multimedia tools, terminology, and techniques to develop multimedia projects. Recommended Prerequisite: CM136 Mass Communications Software.

CM138 BROADCAST NEWS3

Broadcast News is an extension of Basic Media Writing and Intro to Multimedia Communications that emphasizes techniques involved in gathering, writing, and presenting the news specifically for radio, video, and web broadcasts. Students will cover the events and prepare the story for both live and pre-recorded broadcasts. The course will also include instruction for feature story presentation, interviews, and issues that confront the responsible journalist.

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 PERFORMANCE: OFFSTAGE AND ON3

Introduction to Performance offers students a unique and comprehensive awareness that acting is a natural part of everyday life. The student should be able to connect the acting experiences found in the lives of ordinary people with those crafted for theatrical characterization.

CM142 ADVANCED PERFORMANCE: OFF-STAGE AND ON.....3

Advanced Performance is a course intended to further students’ acting skills through the study of various aspects of the creative craft. On a rotating basis, the course may cover aspects of vocal production, period acting styles, or alternative acting approaches and techniques. Course emphasis will be on script analysis, characterization, ensemble acting, creativity, and preparation.

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.

CM155 DIGITAL MAGAZINE PRODUCTION: STORYTELLING3

Digital Magazine Production: Storytelling is the content component of the digital magazine project, published annually in April,

Course Descriptions

which documents a year in the life of Cloud County Community College. This class requires students to use multiple modes and genres of storytelling to meet the needs of a specific audience in a real-time project. Students will cover life at Cloud from multiple perspectives using traditional print, visual, audio, and video formats.

CM156 DIGITAL MAGAZINE PRODUCTION: DESIGN AND STYLE3

Digital Magazine Production: Design and Style is the design component of the digital magazine project, published annually in April, which documents a year in the life of Cloud County Community College. This class focuses on the foundation of the project including principles of design and photography, the creation of a style and layout manual for the project, and the basics of storytelling in print, visual, audio, and video formats.

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.

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) 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.

Course Descriptions

ECONOMICS

- EC101** ▶ **PRINCIPLES OF MACROECONOMICS**3
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 MICROECONOMICS**3
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. Prerequisite: at least a 2.5 GPA in a minimum of 12 General Education hours creditable to a university teacher education program; simultaneous classroom experience (ED101 or a practicum connected with another course).
- 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: at least a 2.5 GPA in a minimum of 12 General Education hours creditable to a university teacher education program; proof of liability insurance. The student must be dual enrolled in ED100 Introduction to Education.
- ED114 ART IN THE ELEMENTARY CLASSROOM**.....3
Art methods, materials and philosophy of children's art at different grade levels. This is considered a lab class.
- ED118 DIVERSE LEARNERS**3
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
Is 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 II**4
Is 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.
- FL113 GERMAN I**4
Is designed to teach basic grammar and vocabulary of the German language. The focus of the course is upon the development of reading, writing, oral, and aural communication skills. Basic elements of the German culture will also be introduced.
- FL114 GERMAN II**4
German II is designed to build upon the material introduced in German I. The focus of the course is upon the further development of reading, writing, oral, and aural communication skills. Basic elements of the German culture will also continue to be introduced. Prerequisite: German I

Course Descriptions

FL200 SPANISH III.....4
 Is a course designed to complete the grammar, vocabulary, and Spanish language began in Spanish II. The focus of the course is upon the enhancement of reading, writing, and oral communication skills. Prerequisite: Spanish II.

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 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
 Is a survey of American History from its European background through the time of the Civil War. The political, economic and social growth of our country is emphasized.

HI123 U.S. HISTORY II.....3
 Is 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 HISTORY3
 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 NUTRITION3
 Is 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
 This course is 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
 This course is 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
 Will focus 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
 This course is 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.

Course Descriptions

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

Is 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 LAB1**

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.

***HE152 INTERACTION TECHNIQUES WITH YOUNG CHILDREN3**

Is 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**

Is 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**

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

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

Is 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**

Is 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**

Student 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**

Is 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**

Is 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**

Is 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**

Is 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**

Is 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**

This class will focus 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**

This laboratory will focus on developing appropriate care giving behaviors for working with infants and toddlers. Focus will be

Course Descriptions

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**

This course is 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.

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

IE106 WELDING.....3

Involves principles and practices in electric and gaseous welding. Course content includes theory of operation of the various electric welding machines (A.C., D.C., M.I.G., and T.I.G.) and gaseous welding equipment (oxygen, acetylene, carbon dioxide, argon, and propane) along with student practice and performance through use. Proficiency in welding various metals, positions, and types of welds will be stressed.

IE107 ADVANCED WELDING.....3

Is an advanced course in welding designed to expand the beginning welders' skills and techniques in arc and acetylene welding,

as well as expanding his understanding of metallurgy, heat treatment of metals and joint and weld defects. Students in the class are allowed to utilize these skills and understandings projects as jointly determined by the instructor and the student.

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..... 1/2

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.

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

Course Descriptions

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 SMALL BUSINESS MANAGEMENT3
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.

MANUFACTURING SKILLS

MS101 BLUEPRINT READING/GEOMETRIC DIMENSIONS & TOLERANCES2
This program provides students with an overview of geometric dimensions and tolerances, teaching basic methods of reading and

interpreting GD&T symbols and how part features are specified in terms of their relationships to other features.

MS102 PRECISION MEASUREMENT & QUALITY CONTROL.....2
The use and reading of precision measurement devices, including mastery of the most common gauges and measurement tools seen in typical work environments, is a requirement for many jobs today. This course enables workers to learn practical, efficient ways to read these devices and build the skills necessary for quality improvement.

MS103 APPLIED SHOP MATHEMATICS I2
Almost every shop activity requires basic math skills. This course will give workers the practical knowledge they need to understand and use basic math for practical problem solving they typically encounter on the job.

MS104 OCCUPATIONAL SAFETY AND HEALTH1
This course provides the student with an understanding of current safety regulations, established safety practices, how to recognize basic hazards and the impact of work related injuries to the company and the employee.

MS105 EMPLOYABILITY SKILLS.....1
This course prepares students for employment by providing them with the information and skills needed to obtain and be successful at a job. Students will learn how to take full advantage of employment opportunities, including mastering resume writing, cover letters, job search and job interview skills.

MATHEMATICS

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

MA091 INTERMEDIATE ALGEBRA APPLICATIONS2
This course is designed and structured to support Intermediate 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 MA110, Intermediate Algebra, or they may enroll in MA099, Elementary Algebra.

MA092 COLLEGE ALGEBRA APPLICATIONS.....1
Provides 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.

MA097 PRE-ALGEBRA3
Provides a comprehensive coverage of basic computational skills and their applications while also covering fractions, decimals,

Course Descriptions

ratios and proportions, percents, measurement and a brief introduction to variables and 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. Prerequisite: Pre-Algebra with a C or better, or appropriate test scores.

MA105 SURVEY OF MATHEMATICS3

Is designed for students earning a two-year, non-transfer degree. Topics covered will include finance, statistics, probability, mathematical relationships, graphs of linear equations and their properties, and geometry. This course will not satisfy prerequisite requirements for College Algebra. Prerequisite: appropriate test scores or Elementary Algebra with a grade C or better.

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 ALGEBRA.....3

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 or its equivalent.

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 LINEAR ALGEBRA AND GENERAL CALCULUS 3

This course is an introduction to calculus and linear algebra concepts 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, basic integrals, and systems of equations. Practical applications include analysis of mixing problems, 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, and integrals. Practical applications include graphing, motion, optimization, related rates, Newton's Method, and L'Hopital's Rule. 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, exponential, and hyperbolic 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 III.....5

Students will study vectors, vector functions, surfaces, differentiation, integration, cylindrical and spherical coordinates, and vector calculus. Practical applications will include arc length, area, volume, optimization, and Kepler's Laws. 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

Course Descriptions

mathematics to social issues such as voting, and financial applications. Prerequisite: MA 110 Intermediate Algebra with a grade of C or better.

MA220 COOPERATIVE EDUCATION INTERNSHIP 1-6
SEE CA220.

MUSIC

***MU100 MUSIC APPRECIATION.....3**
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.

MU102 WORLD MUSIC3
World Music is a study of music in the context of human civilization and a people's way of life. Cultural awareness leads to an understanding of that way of life. Cultures to be studied will include: Navajo, West Africa, American Blues, South India, Indonesia, Japan, and Ecuador. Recommended for the general student and music major.

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 I.....4
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 II.....4
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 II 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 IV.....4
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 II.....1
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 BAND.....1
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 ENSEMBLE.....1
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.

Course Descriptions

MU130 APPLIED MUSIC: VOICE.....1

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

MU134 APPLIED MUSIC: VOICE II1

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 II.....1

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 II.....1

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 III.....1

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 III1

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.

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

***NR111 LIFESPAN NURSING I.....9**

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, and admission to the associate degree nursing program.

***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 are part of this course. Prerequisite: Successful completion of Lifespan Nursing I, Pathophysiology, and Pharmacology I with a grade of C or higher.

***NR113 PHARMACOLOGY I.....1**

This course is an introduction to pharmacology and complementary therapy focusing on drug dose calculations and pharmacologic terminology. Prerequisite: Intermediate Algebra and admission to the ADN program.

***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: Pharmacology I with a grade C or better.

***NR115 PHARMACOLOGY III1**

This course focuses on advanced pharmacologic dose calculations and nursing implications for patients across the lifespan with

Course Descriptions

complex health alterations. Prerequisite: Pharmacology II with a grade C or better or admission to the Nursing Program with Advanced Standing.

***NR210 LPN TO RN BRIDGE COURSE.....2**
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 C or higher. (or) LPN licensure, LPN to ADN Bridge, 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 III with a grade C or higher and Lifespan Nursing III with a grade C 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.

***PE107 BOWLING I.....1**
Is designed to teach the fundamentals of bowling to the beginner or to one who needs to improve his\her skill.

***PE108 ARCHERY1**
Is designed for students interested in the sport of archery. The course will teach the student fundamentals in archery skills and competition.

PE109 GOLF I.....1
Is designed to teach the fundamentals of golf.

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.

PE113 SOCIAL DANCE I1
Is a beginning course teaching basic steps such as fox-trot, waltz, polka, line dances, jitterbug, etc., and a knowledge of ballroom etiquette.

PE114 SOCIAL DANCE II.....1
Includes advanced ballroom dance steps. Learn steps to the hustle, cha cha, folk dancing, and variations of steps learned in Social Dance I. Prerequisite: Social Dance I.

PE118 AEROBICS.....1
Is a course designed to achieve and maintain a persons total fitness. Total fitness is achieved through the development of strength, endurance, dedication, forming good attitudes and self-discipline.

PE119 WEIGHT TRAINING AND PHYSICAL FITNESS.....1
Involves development of the muscular system as well as overall fitness. Includes explanation of muscular function and how to plan a conditioning program suited for an individual. This course is physically demanding, but very satisfying for those interested in improving their physical condition.

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.)

Course Descriptions

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.

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 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.

PE142 CYCLING1
 An introductory road cycling course. Emphasis will be placed on proper bicycle maintenance, riding technique, safety, and etiquette. The course is designed to provide students with an appreciation of cycling as a way to achieve personal health, fitness, or competitive goals. Mountain and cross bikes are welcome, but the majority of riding will be on pavement. This course can be physically demanding, but satisfying for those interested in improving their physical condition.

Course Descriptions

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.

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.

PE164 VARSITY SPORTS: SOCCER.....1

A sport for varsity soccer players. It begins two weeks prior to the fall semester and its conclusion coincides with the end of the spring semester. Soccer consists of a number of daily activities to include practice for skill and fitness development, study hall, and attendance checks all of which are designed to promote the success of the student athletes involved.

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 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

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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.

PHILOSOPHY

PH100 ▶ INTRODUCTION TO PHILOSOPHY3
Is 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
Is 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 ▶ CHRISTIAN ETHICS IN OUR CONTEMPORARY SOCIETY3
Traditional ethical theories are discussed, with reference to Plato, Aristotle, Bentham, Mill, Kant and John Rawls. The nature of

ethics is clarified in terms of how science and philosophy differ in their approaches to moral behavior. Biblical ethics of both Old and New Testaments are examined and compared to traditional social and moral issues. Moral problems and social issues such as abortion, capital punishment, business practices, sexuality, world hunger, pornography and war are studied from various viewpoints.

PHOTOGRAPHY

***PT101 PHOTOGRAPHY I.....3**
Is a beginning course emphasizing types and basic construction of the camera, elements of good picture taking and the use of the darkroom. (Dual listed with art)

***PT102 PHOTOGRAPHY II.....3**
Is a continuation of Photography I with emphasis on picture taking and darkroom procedure. Prerequisite: Photography I or permission by instructor. (Dual listed with art)

PT229 ADVANCED DIGITAL IMAGING.....3
Advanced work in Digital Photography to develop an understanding of advanced photographic techniques and computer assisted image manipulation. This course will include, but not be limited to, the following topics; advanced camera functions, advanced 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.

* A lab fee will be assessed for these courses.

RELIGION

RE102 CONTEMPORARY CHRISTIAN THOUGHT2
Is directed to the innovators of contemporary religious thinking, the secularizers and to the existentialists movements. Such theologians as Barth, Niebuhr, Brunner, Bonhoeffer, Chadin, Kierkegaard, Marcel, Bullman, Buber and others are considered. The newsworthy theological opinion-makers are presented.

RE103 RELIGION IN CONTEMPORARY AMERICA.....3
Is an analysis of current American religious bodies in contemporary history. Consideration of both the more traditional bodies and the more recent arrivals will be evaluated. This course, as an analysis of current American religious denominations and the social and political dynamics that they have made on American society. We will use the time frames of the decades of 1955-64, 1965-84, and 1985-94. Consideration will be given to the more traditional denominational bodies along with nontraditional that have become a part of the religious scene in America in recent history.

RE104 ▶ WORLD RELIGIONS.....3
Discusses religions of mankind set in historical perspective. The

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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

*SC100 SURVEY OF SCIENCE3

This course is intended to familiarize the student with the methods of scientific discovery and investigation. Students will study phenomena in a variety of scientific fields to become familiar with the scientific process used for explaining phenomena. Students will also become aware of the effects of science on nature and society. This course includes three hours lecture time.

*SC101 ▸ GENERAL BIOLOGY +4

Engages the non-biology major in explorations of the unity and 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

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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 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.

***SC129 INTRODUCTION TO CHEMISTRY1**
Engages the student in an overview of chemical concepts related to content in the biological sciences. Particular attention is devoted to chemical structure, chemical interactions and the chemical composition of cells as students acquire a fundamental understanding of the chemical foundation of life.

***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.

***SC134 ORGANIC CHEMISTRY I +5**
Is a study of the general principles of organic chemistry with emphasis on the major types of aliphatic compounds; and introduction to aromatic compounds; spectroscopy and certain biochemically important compounds. This course is designed to meet the needs of students requiring either one semester of organic chemistry or the two semester sequence. This course includes three hours lecture and three hours laboratory time. Prerequisite: Chemistry I and Chemistry II with a C or better.

***SC135 ORGANIC CHEMISTRY II +5**
Will be a continuation of Organic Chemistry I. Areas of study will include organic reactions, reaction-specific reagents, mechanisms for reactions, a continued look at functional groups and their nomenclature, and an introduction to biochemical molecules. Concepts learned in the classroom will be applied in the laboratory. This course includes three hours lecture and three hours laboratory time. Prerequisite: Organic Chemistry I with a C or better.

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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. 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.

SC146 ENVIRONMENTAL SCIENCE AND CONSERVATION3

An interdisciplinary study from the perspective of Environmental Science. This course will examine the use of natural resources across the planet, with emphases on conservation, resource management, and significant human impacts on natural systems. Major topics covered include an introduction to Earth systems science and environmental science; agriculture, soils, biotechnology, and the production of food; the atmosphere, pollution, and climate change; the hydrosphere, water quality, and aquaculture; biodiversity, ecosystems and environmental ecology; natural resource extraction, the production of energy; and sustainable solutions. Special attention will be given to analyzing these topics in light of current events and governmental policy at the local, state, and federal levels. This course includes three hours lecture. This course has no lab. Students wishing to take Environmental Science and Conservation Lab must enroll in SC147.

***SC147 ENVIRONMENTAL SCIENCE AND CONSERVATION LAB +1**

An interdisciplinary study from the perspective of Environmental Science. This course will examine the use of natural resources across the planet, with emphases on conservation, resource management, and significant human impacts on natural systems. Major topics covered include an introduction to Earth systems science and environmental science; agriculture, soils, biotechnology, and the production of food; the atmosphere, pollution, and climate change; the hydrosphere, water quality, and aquaculture; biodiversity, ecosystems and environmental ecology; natural resource extraction, the production of energy; sustainable solutions. Lab work will consist of observation and demonstration, experimentation with such materials as soil, water quality testing kits, and lab report writing; topics as described above. This course includes one and one-half hours of laboratory time.

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.

SC199 GENERAL ZOOLOGY +4

In this class, students are given the opportunity to demonstrate an understanding of each Phyla of the Kingdom Animalia. Students must determine characteristics of the Phyla based on morphological, reproductive, behavioral, and ecological differences enhancing an understanding of the diversity of species in the animal kingdom. Students will have to understand the classification system and utilize taxonomy to differentiate organisms. In the laboratory, light microscopy and dissection will be utilized to determine structural and morphological characteristics in

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conjunction with an ability for identification. This course includes three hours of lecture and one and one-half hours of laboratory time. Prerequisite: Principles of Biology I.

SC220 COOPERATIVE EDUCATION INTERNSHIP 1-6
See CA220.

* A lab fee will be assessed for these courses.
+ These courses are considered lab courses.

SOCIAL SCIENCE

SS099 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.

SS100 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.

SS101 GENERAL PSYCHOLOGY3
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 abnormal psychology, human cognition, cognitive development, individual differences and social psychology. The classroom lab activities provide experience with methods of research and data collection.

SS102 ABNORMAL PSYCHOLOGY3
Presents an overview of deviant behavior study, the concept of differential diagnosis categories of deviant behavior, an overview of the major theoretical models explaining deviant behavior and a discussion of major psychological and psychiatric models for treating and modifying deviant behavior.

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
This course 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.

SS107 HUMAN SEXUALITY3
Is an introductory course focusing on the biological, psychological, social and legal aspects of human sexuality with the major emphasis on the development of wholesome attitudes toward the masculine and/or feminine elements of one's unique development.

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 PSYCHOLOGY3
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.

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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 RACE AND ETHNIC RELATIONS IN THE UNITED STATES.....3

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

SS140 ▶ **U.S. GOVERNMENT: NATIONAL**3

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 ISSUES3

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 RELATIONS**3

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.

* A lab fee will be assessed for these courses.

SOLAR ENERGY

***SE100 INTRODUCTION TO SOLAR ENERGY**3

Introduction to Solar Energy students will be exposed to many facets of the solar industry. This course will cover basic principles of 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 DESIGN**3

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 DESIGN**3

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 INSTALLATION**3

Solar Energy Advanced Installation will cover all aspects of the installation of a solar PV project. The course will explore the safety

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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.

***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.

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.

***WE102 ENERGY INDUSTRY FUNDAMENTALS3**
Energy Industry Fundamentals provides a broad understanding of the electric and natural gas utility industry and the energy generation, transmission, and distribution infrastructure, commonly called the "largest machine in the world," which forms the backbone for the industry. The course includes business models, regulations, types of energy and their conversion to useable energy such as electric power, how generated power is transmitted and distributed to the point of use, emerging technologies, and the connection to careers in the energy industry.

***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.

***WE130 WIND PUBLIC/LANDOWNER RELATIONS3**
Educating the public and/or landowners on the advantages and disadvantages of wind energy is a necessary step in the development of a wind project. Information on economic and environmental issues will be necessary from the initial

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development period to the completion of the wind project. Students will learn how to answer the Myth vs. Fact questions concerning wind farm development. Procedures for obtaining the proper permits and access rights to enter property to assess the wind resource will be addressed. Additionally, students will learn about setback constraints, archaeological restrictions, aviation obstruction marking requirements, and other organizational and governmental regulations affecting wind power project development.

***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.

***WE205 WIND BUSINESS3**
 Wind Business is designed to learn about topics in business as they apply to the wind industry. Students will become familiar with different manufacturers of wind turbines, warranties, and service agreements. Knowledge of the supply and demand of wind equipment is necessary when developing a wind project. Students will learn about dispatchable and non-dispatchable resources, why curtailment is sometimes necessary, and capacity factor. Information related to the construction process of a wind farm will be included in this course.

***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. Students must be admitted to the Wind Energy Technology Program or permission of the Department Chair to enroll in this course.

***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. Students must be admitted to the Wind Energy Technology Program or permission of the Department Chair to enroll in this course.

WE220 COOPERATIVE EDUCATION INTERNSHIP 1-6
 See CA220. Students must be admitted to the Wind Energy Technology Program or permission of the Department Chair to enroll in this course.

***WE225 MOTORS, GENERATORS, PLCS3**
 Provides students with the basic understanding of the principles of motors, generators, motor controls, and programmable logic controllers (PLCs). Both electromechanical and solid state electronic control devices are covered in this course. Students must be admitted to the Wind Energy Technology Program or permission of the Department Chair to enroll 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. Students must be admitted to the Wind Energy Technology Program or permission of the Department Chair to enroll in this course.

***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). Students must be admitted to the Wind Energy Technology Program or permission of the Department Chair to enroll in this course.

***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

Course Descriptions

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. Students must be admitted to the Wind Energy Technology Program to enroll in this course.

***WE255 AIRFOILS AND COMPOSITE REPAIR3**

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.

***WE260 WIND TURBINE SITING3**

Students will be exposed to many facets of the proper placement (siting) of individual wind turbines as well as wind farms. This course will cover basic principles of how to find the best site and if it is suitable for wind energy. Class topics will cover the physical restrictions, institutional restrictions, wind turbine noise, placement near the grid, spacing of turbines, social aspects of wind turbines, and environmental issues associated with wind turbines.

***WE262 BLADE REPAIR OPERATIONS4**

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 be admitted to the Wind Energy Technology Program or permission of the Department Chair to enroll in this course.

***WE265 FIELD TRAINING & PROJECT OPERATIONS5**

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 be admitted to the Wind Energy Technology Program or permission of the Department Chair to enroll in this course.

***WE270 TRANSFORMER THEORY3**

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. Students must be admitted to the Wind Energy Technology Program to enroll in this course.

***WE280 WIND ENERGY TECHNOLOGY INTERNSHIP4**

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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