Catalog 2017-2018

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Algonia Campus
2111 U.S. Highway 169 North
P.O. Box 680
Algona, Iowa 50511
(515) 295-9455  1-877-807-9583
FAX (515) 295-3729

Continuing Education
300 South 18th Street
Estherville, Iowa 51334
(712) 362-7231  1-800-252-5664
FAX (712) 362-3969

Vocational Programs
2071 U.S. Highway 169 North
P.O. Box 680
Algona, Iowa 50511
(515) 295-9455  1-877-807-9583
FAX (515) 295-3729

Technical Programs
300 South 18th Street
Estherville, Iowa 51334
(712) 362-7231  1-800-252-5664
FAX (712) 362-3969

Emmetsburg Campus
3200 College Drive
Emmetsburg, Iowa 50536
(712) 852-3554  1-800-242-5108
FAX (712) 852-2152

Technical Programs
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Emmetsburg, Iowa 50536
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FAX (712) 852-2152


Individuals having questions or complaints related to compliance with this policy should contact Kathy Muller, Iowa Lakes Community College EEO/AA Officer at 712-362-0433 or the Director of the Office for Civil Rights, U.S. Department of Education, Citigroup Center, 500 W. Madison, Suite 1475, Chicago, IL 60661, phone number 312/730-1560, fax 312/730-1576

All provisions herein contained are subject to change without notice and do not constitute a contract or offer to contract with any person.

Spirit Lake Campus
800 21st Street
Spirit Lake, Iowa 51360
(712) 336-3439  1-877-807-9584
FAX (712) 336-1357


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THE MISSION
Iowa Lakes Community College is a public, comprehensive educational institution accredited by the Commission on Institutions of Higher Education of the North Central Association of Colleges and Schools. The college was established in 1967 under provision of Chapters 260C and 260D, Code of Iowa. “To provide opportunities for quality lifelong learning and promote economic development for [the] communities” of northwest Iowa is the mission of Iowa Lakes Community College. Over 72,000 people reside in this predominantly rural five-county district encompassing approximately 2,900 square miles. Through its five campuses and an interactive distance learning system, Iowa Lakes currently enrolls more than 2,200 full- and part-time students. The college offers liberal arts, career option and vocational-technical courses leading toward associate degrees, diplomas and certificates. It is committed to continuous quality improvement while serving the changing needs of its constituents.

Iowa Lakes Community College is noted for its innovative and visionary programming. In 1982, it was the second community college in the state to build an Instructional Television Fixed System (ITFS) providing interactive television access to five college sites and 14 secondary schools. In 1993, Iowa Lakes became the first community college to complete a hook-up with the Iowa Communications Network (ICN), a fiber optic interactive video system linking all community colleges and the regents’ universities in the state. This system now links other colleges, public schools, hospitals and government agencies throughout Iowa as well.

In 1985, Iowa Lakes became the first Iowa community college to mandate entrance assessment of all new students. The goal of this assessment program is to help all students be successful in college by ensuring development of minimum competencies in mathematics, writing and reading prior to graduation from Iowa Lakes.

The college offers a variety of outreach services to area communities including a full schedule of continuing education courses, college preparatory courses, support programming, business/industry training and retraining programs, and facilitation of economic development.

Finally, Iowa Lakes collaborates with three four-year institutions offering baccalaureate degree programs to area citizens who are unable to relocate due to job or family commitments.

OPPORTUNITIES
- Extend opportunities for personal and professional growth that are responsive to the dynamic needs of the individual and society.
- Guarantee access to postsecondary education opportunities through an “open door” policy.
- Ensure all constituents have the opportunity and the support necessary to take advantage of the postsecondary education programs and services offered by the college.
- Provide appropriate personnel services.

LIFELONG LEARNING
- Provide learner centered activities that empower individuals to reach their potential and fulfill their personal and career goals.
- Enable students to complete the first two years of college work, including general education and pre-professional education and upon completion to achieve successful transfer to four-year colleges and universities.
- Enable students to complete vocational and technical programs designed to prepare them for employment in occupations in a global society.
- Provide opportunities for individuals to continue learning throughout their lifetime.
- Provide programs for high school completion and development of the academic foundation necessary for success in college.
- Enable eligible secondary students to participate in college courses for credit while still in high school.
- Provide vocational and technical training for persons not enrolled in high school and who have not completed high school.

ECONOMIC DEVELOPMENT
- Support partnerships among business, community and labor groups that strengthen the economic health and quality of life for area residents.
- Deliver programs for in-service training and retraining for workers to help employers maintain a competitive work force.
- Provide economic development assistance to area businesses, industries, cities and counties in cooperation with federal, state and local agencies.

COMMUNITIES
- Promote collaborations with communities that support access to college programs and services with sensitivity to diversity and equal opportunities for all.
- Promote among students an awareness of their responsibilities as citizens in our contemporary and dynamic society.
- Extend the scope of college resources through active partnerships with agencies in the service area.

HISTORY
Iowa Lakes Community College was officially organized in 1967 when the first board of directors met to begin planning for the organization and development of the college. Legislation passed by the Iowa legislature established Merged Area III as a part of a statewide plan. This area included all or parts of the counties of Clay, Dickinson, Emmet, Kossuth and Palo Alto and encompassed, at the time, 26 community school districts and two parochial school systems.

In 1968 the board approved the merger of the Estherville Junior College and its facilities into the new district. The college had been operated by the Estherville public schools since its founding in 1924.

The Emmetsburg Community College was merged in 1970 to accomplish the goal of operating two major campuses in the area. The college had been operated since 1930 by the Emmetsburg public schools.

Campuses are located at Emmetsburg, Estherville, Algona, Spencer and Spirit Lake.

The Estherville Campus is located in the eastern part of Estherville at 300 South 18th Street. Facilities serve liberal arts, career option, vocational and technical programs.

Vocational, technical, career option and liberal arts programs are offered at the Emmetsburg Campus in the northwest part of Emmetsburg at 3200 College Drive.

A facility in Algona was purchased in late 1986 and has been developed into a college campus with facilities for liberal arts courses, community and education services, and a success center/library. The Algona Campus is located in the northern part of Algona at 2111 U.S. Highway 169.
The Spencer Campus, located at 1900 Grand Avenue includes facilities for liberal arts, technical, vocational courses, community services, education services, a success center/library, the area small business development center and Retired & Senior Volunteer Program.

The Spirit Lake Campus opened in 1984. In late 1995 the campus moved into new facilities located at 800 21st Street. The building houses evening, liberal arts courses, a computer lab, community services, education services, success center/library.

An instructional television system began offering courses to the area in 1983. Beginning with two channels, six sites and four courses, the system now televises 40 to 50 live college courses per semester to college sites. All courses necessary for a two-year Associate in Arts degree are offered on the system.

The college is also a participant in the Iowa Communications Network which allows sharing classes with other colleges in the state via a state-of-the-art fiber optic system. A classroom at each campus is equipped for two-way television and audio.

In addition, Iowa Lakes Community College is a member of the Iowa Community College Online Consortium providing extended online learning opportunities to our local service area and beyond through the World Wide Web, www.iowaconline.org.

The continuing education department uses classroom facilities at college-owned sites and in Area III school districts to deliver instruction and services to local residents.

GOVERNANCE AND ADMINISTRATION

The college is governed by a seven-member board of trustees elected by the residents of Merged Area III. Administrative offices are located at 19 South Seventh Street in Estherville, which houses most members of the President’s Cabinet, central administrative staff and the college administrative computer center.

In addition to the college president, the President’s Cabinet consists of a vice president of administration, executive dean of instruction and development, executive deans of the Emmetsburg and Estherville campuses, executive director of business & community relations, executive director of facilities management, and the executive director of marketing, and executive dean of students.

The President’s Cabinet, along with supervisory personnel from the Administrative Team, manages the operation of the college district.

ACCREDITATION

Iowa Lakes Community College is accredited as an institution by the Higher Learning Commission, North Central Association of Colleges and Schools, 230 South LaSalle Street, Suite 7-500, Chicago, Illinois. In 1975, Iowa Lakes Community College was granted accreditation by the North Central Association of Colleges and Schools (now known as the Higher Learning Commission or HLC). Iowa Lakes is accredited by the Iowa Department of Education. State accreditation cycles are coordinated with HLC cycles.

The college is an institutional member of the American Association of Community Colleges. Programs are approved for veteran’s education and by the U.S. Justice Department, the Federal Aviation Administration, and the Iowa Board of Nursing. Some academic programs have also sought and received accreditations. Program web pages provide details of these program-level accreditations.

Academic Quality Improvement Program
The Higher Learning Commission

EQUAL OPPORTUNITY STATEMENT/ POLICY OF NON-DISCRIMINATION

It is the policy of Iowa Lakes Community College not to discriminate on the basis of race, color, national origin, sex, disability, age employment, sexual orientation, gender identity, genetic information, creed, religion and actual or potential parental, family or marital status in its programs, activities, or employment practices as required by the Iowa Code §§216.6 and 216.9, Titles VI and VII of the Civil Rights Act of 1964 (42 U.S.C. §§ 2000d and 2000e), the Equal Pay Act of 1973 (29 U.S.C. § 206, et seq.), Title IX (Educational Amendments, 20 U.S.C §§ 1681 – 1688), Section 504 (Rehabilitation Act of 1973, 29 U.S.C. § 794), and Title II of the Americans with Disabilities Act (42 U.S.C. § 12101, et seq.).

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STUDENT SERVICES

ADMISSION

Iowa Lakes Community College maintains an open-door policy of admission for students who have the ability, character and preparation to benefit from the educational programs offered at the college. Application forms may be obtained from high school counselors or from any Iowa Lakes Community College campus.

Telephone requests may be directed to 1-866-IA-LAKES (866/425-2537). Online applications can be made at www.iowalakes.edu.

ADMISSION POLICIES-CREDIT PROGRAMS

Iowa Lakes admits students to the arts and science, career option, vocational and technical programs who generally have either a high school diploma or its equivalent as determined by the HiSET testing program. Individuals who have not completed one or the other may be admitted on an individual basis to various programs offered by the college. The college also offers programs to assist with high school completion or the HiSET.

Admission to the college does not ensure admission to all programs offered at Iowa Lakes. The college reserves the right to guide the placement of students on the basis of counseling, examinations, pre-enrollment interviews and past academic achievement, as well as available space in programs.

All students applying for admission to credit programs at the college must submit a completed Iowa Lakes application form, a transcript of high school work or the HiSET and official transcripts sent directly from each postsecondary institution of higher education attended. Basic skills assessment of English, reading and mathematics is done with every entering student at Iowa Lakes. The tests used are Accuplacer, SAT, ASSET, COMPASS and the ACT. Those who are underprepared for college level courses may need to take courses to develop these skills further before entering college English or mathematics. Nursing applicants must submit ACT program scores and attend an advising session. Some programs require medical examinations and other assessments before admission and/or advance fee deposits.

Applicants will be notified of their admission to the college by the Executive Dean of Students.

READMISSION

Students who have formerly attended Iowa Lakes Community College and who wish to return after an absence of a term (other than the summer session) should apply for readmission at the admission office of the campus they plan to enter. Students readmitted after an absence will be required to fulfill current graduation requirements.
TRANSFER STUDENTS
Transfer students must complete all admission requirements including submission of official transcripts directly from every postsecondary school or college attended whether or not credit was earned.

INTERNATIONAL STUDENTS
A student from another country must complete the Admissions application form and provide financial information, sponsorship, and TOEFL scores. Official transcripts of all secondary school and higher education records must be sent directly to the admission office. Notarized translations must be included for non-English language records. Transcripts must include specific dates of school attendance, courses taken during each year of attendance, grades and the grading scale used. The college may use the services of a service bureau to help in evaluating transcripts from other countries; charges are paid by the applicant. Students whose native language is not English must submit evidence of their English proficiency by a score of 500 or above on the Test of English as a Foreign Language (TOEFL) in its paper form. A score of 173 or more is required on the computer version of the TOEFL or 61 on the Internet Based TOEFL prior to acceptance.

International students must submit evidence of financial ability to meet college and living expenses during the first year of attendance. A financial status questionnaire, available from the admission office, must be completed before an immigration I-20 form will be issued. Visa regulations of the U.S. Department of Immigration and Naturalization must be followed. This school is authorized under Federal law to enroll nonimmigrant students.

ADMISSION CONTINUING EDUCATION
Admission to continuing education programs is varied and flexible. Adults are encouraged to enroll regardless of past educational achievement or number of years of formal education. Enrollment in adult basic education, high school completion, general adult education, adult vocational supplementary education, adult vocational short courses or professional continuing education is accomplished by contacting the continuing education office at 712/362-7231 or 800/252-5664.

RESIDENCY REQUIREMENTS
Students enrolling at Iowa Lakes Community College are classified as residents or non-residents for admission, tuition and fee purposes. Each student must declare residency correctly under applicable rules and laws of the state of Iowa as well as the policies of the college board of trustees. The primary determination of residency is the reason a person is in the state of Iowa; the second determination is the length of time the person has resided in Iowa. If a person is in the state primarily for educational purposes, that person will be considered a non-resident.

Students who have been classified as non-residents, and who believe they should be eligible for resident tuition, may apply for reconsideration of their cases. The director of records and registration (registrar) may require two or more written documents, affidavits and other evidence considered necessary to establish the residency of the student. This may include voter registration information, driver's license, motor vehicle registration, an Iowa state income tax return, and proof of Iowa homestead credit on property taxes, signed and notarized documentation from an employer verifying employment in Iowa, or a signed and notarized statement from the student describing employment and sources of support. Documentation must verify residency within the state of Iowa for at least 90 days prior to the term for which the student is enrolling.

Residence for college enrollment and fee purposes may be different from residence for other purposes. The burden of establishing exemption from non-resident status is with the student. The complete Uniform Policy on Student Residency Status is available from the registrar or from the State Board of Education.

An adverse decision by the director of records and registration may be appealed. The Academic Review Committee acts as the appeals body for residency questions. The decision of the committee is final. An application form and further information is available from the records office at Emmetsburg or Estherville. A change of status is effective for the next term following the change.

ADVANCE REGISTRATION AND ORIENTATION

ADVANCE REGISTRATION
Registration for new freshmen takes place at Iowa Lakes during the summer. Iowa Lakes recognizes that the hectic fall registration procedure can be an unsettling, bewildering experience for a new student. The college has established an early registration date when family and friends are encouraged to accompany the student. Processes of advising and registration are accomplished in a convenient manner.

NEW STUDENT ORIENTATION
At the advance registration and orientation sessions, each student is assigned an academic advisor. Many students come to Iowa Lakes with a particular program of study in mind; these students are assigned advisors in those programs. Other students are undecided about their future. In such cases, students are encouraged to access the Career Resource Centers located in Estherville and Emmetsburg. Career interest assessment, career resource libraries and individual appointments with advisors/counselors may help clarify academic and career goals.

Orientation continues during the first day of the term. Payment of tuition and fees is the final step in registration. The orientation process continues through the term and ends with scheduling, registration and payment of tuition and fees for the next term. All new freshmen who register as full-time day students should attend College 101.

STUDENT RESPONSIBILITY
FOR COLLEGE INFORMATION
Each student is responsible for information appearing in the catalog, student handbook and other college publications. Failure to read the regulations and other information will not be considered an excuse for noncompliance. The college reserves the right to change policies or to revise curricula as necessary due to unanticipated circumstances. Program or course availability may be affected by enrollments, funding, or instructor availability.

If a student feels that extenuating circumstances might justify the waiver of a particular college policy, procedure, or regulation, a petition may be filed according to established procedures. Contact the director of records and registration for information. Each student's assigned college e-mail address will be used for all official college business.

CLASS PARTICIPATION
To help ensure academic success, students are expected to attend all class meetings for the courses in which they have enrolled. Any absence, regardless of the reason, results in the loss of instruction and interferes with the learning process. Absence does not lessen the student's responsibility for meeting the requirements of any course and it is the student's responsibility to complete the work missed. The specific participation and make-up policies of each instructor are contained in course orientation information and/or course syllabus. Students are expected to complete all class assignments and examinations on time. When a student anticipates missing a test or a class, a telephone call in advance to the instructor may save a great deal of difficulty later.
ACADEMIC HONORS

The deans' honors list is published each term which includes names of those full-time students (12 or more graded credits) who have earned a grade point average of 3.25 to 3.99. Students with a 4.00 grade point average are placed on the college president's honors list. The lists are released to area news media.

Candidates for graduation who have earned a cumulative grade point average of 3.25 or higher are honored at the commencement ceremony by identifying their honors in the printed program. Three classes of recognition are indicated:

- Cum laude 3.25 - 3.49
- Magna cum laude 3.50 - 3.74
- Summa cum laude 3.75 - 4.00

Graduation honors are also posted on the academic record based on the final cumulative GPA.

ACADEMIC PROBATION AND RETENTION

Iowa Lakes Community College provides assistance to students to help them to succeed academically. The purpose of academic probation at Iowa Lakes is to indicate the need for special or individualized help for the student who has academic difficulty. The college is concerned when a student has problems and faculty and staff are available to provide assistance. Academic probation is somewhat different from financial aid probation, which is also covered in this catalog.

ACADEMIC PROBATION STATUSES

A status of probation means that the student and advisor must meet to determine what course of action will lead to success during the next enrollment period. Strict probation means that the student may continue enrollment only with a written contract for performance; failure to meet the terms of the contract results in immediate suspension from classes. Participation in Strategies for Academic Success (or an alternative assignment approved by the facilitator) is usually required of students on strict probation, except during the summer term.

Suspension means that a student is prohibited from attending classes and is dropped from all courses. A suspension is for a full semester; a second suspension is for a year. A semester is counted if the student is enrolled for six or more credits.

After the first semester in college, a new freshman will be placed on probation if the GPA is less than 1.50. The student will be placed on strict probation if the GPA is less than 0.80. After more than one semester in college, a student will be placed on probation if the cumulative GPA is less than 2.00. A student with more than one semester in college will be placed on strict probation if the cumulative GPA remains less than 2.00 or if the term GPA is less than 1.00 and the cumulative GPA drops below 2.00.

A student on strict probation will be suspended if the term GPA is less than 2.00.

A student on probation or strict probation may continue enrollment if the term GPA is 2.00 or better, even if the cumulative GPA does not reach 2.00.

A student who earns a cumulative GPA of 2.00 or better will be returned to academic good standing. The Academic Review Committee will review records of students on continued probation and may revise status based on further information such as absences, excessive number of 'I', 'Q' or 'W' grades, etc. Transfer students will be placed on probation if a similar record at Iowa Lakes would result in a probationary status.

FINANCIAL AID SATISFACTORY ACADEMIC PROGRESS STANDARDS

GENERAL INFORMATION

The U.S. Department of Education requires each institution to establish and consistently apply standards of reasonable academic progress to all students who want to establish or maintain financial aid eligibility. This federal requirement indicates that students must maintain satisfactory progress toward their degree objectives in order to receive financial aid. Iowa Lakes Community College has established their standards, which are based on qualitative and quantitative measures. They require students to:

1. Maintain a minimum cumulative grade point average at the completion of each term.
2. Maintain a specific pace of completion at the end of each term.
3. Achieve their program completion within 150% of the published length of the program in credit hours attempted.

MAXIMUM TIME FRAME REQUIREMENT

You will not be eligible to receive financial aid once you have attempted more than 150 percent of the normal credits required for your degree or diploma program, or once it becomes clear that you cannot mathematically finish the program within the 150% maximum time frame. (For example: programs requiring 60 credit hours for graduation, 90 credit hours would be the 150% program maximum.) All attempted hours are counted, including transfer hours, whether or not financial aid was received or the course work was successfully completed. Standards are established as minimum requirements for students who receive financial aid from any federal, state, and institutional programs administered by Iowa Lakes.

MAKING PROGRESS TOWARD A DEGREE

Students must maintain a minimum 1.75 cumulative G.P.A. at the end of the first term of enrollment. Each subsequent term after the first, students will be required to maintain a 2.0 cumulative G.P.A.

The student must successfully complete 70% of their attempted credit hours. Successful completion of courses are defined as receiving a grade of A, B, C, D, or P. Courses receiving grades of F, I, W, K, Z or Q are not counted as completed grades. Students must complete their program requirements within a time frame equivalent to 150% of their program length and/or credit hours required for graduation purposes. Transfer credits attributable to the student’s degree will be evaluated to determine the student’s Satisfactory Progress status.

SATISFACTORY ACADEMIC PROGRESS- WARNING STATUS

Students are placed in a warning status the first time they do not meet the minimum cumulative grade point average and/or pace of completion requirement. During the warning term, students remain eligible to receive financial aid for one term. To remain eligible to receive financial aid in future terms the student must, during the warning term:

1. Increase their cumulative grade point average to meet the minimum grade point average.
2. Successfully complete all courses attempted with grades of A, B, C, D, or P.
3. Be able to reach Satisfactory Academic Progress by the end of the semester.
Satisfactory Academic Progress - Ineligible Status

Students are declared ineligible for financial aid if they:
1. Do not meet the warning status requirements as listed above.
2. Do not achieve their program objectives within 150% of the published time frame of the academic program as measured in credit hours.
3. Complete the semester with letter grades of "F" and/or "W".
4. Complete the semester with a G.P.A. of 0.0.
5. Completing 0.0% of their attempted credit hours.

Regaining Eligibility

1. Students may earn the necessary grade point average or semester hours while not receiving financial aid (enrolled at their own expense).
2. Students may submit written appeals documenting extenuating circumstances that prevented them from meeting the standards. Extenuating circumstances include, but are not limited to:
   a. Injury or illness of student.
   b. Death of immediate family member.

Appeals should be submitted to the Financial Aid Office at Emmetsburg. The appeal needs to be accompanied by an Academic Plan Worksheet signed by the student and his/her advisor. Decisions on appeals will be made and the decision will be communicated to the student within 15 working days of receipt of the appeal. When appeals are approved, students are given specific requirements to meet. Students who do not have appeals approved are declared ineligible for financial aid.

If an appeal is granted, the student will be placed on either Probation or an Academic Plan:
- If the student is placed on Probation, they are eligible for financial aid for that term. At the end of the term they are re-evaluated and are either making satisfactory academic progress or are ineligible. If they are ineligible, they are the opportunity to appeal.
- If the student is placed on Academic Plan, they will remain on the plan until they either are meeting satisfactory academic progress or fail to follow the plan. If the student fails to follow the plan, they will become ineligible. They have the opportunity to appeal.

Monitoring of Academic Progress

The academic progress of financial aid recipients is reviewed at the end of each term. Students will be notified of status changes by letter.

New Start

Iowa Lakes Community College offers a "New Start" program for students a) who change programs of study after receiving unsatisfactory grades in a previous program at Iowa Lakes Community College; or b) who re-enroll at the college in the same program after an absence of at least two years.

It allows the student to begin a new cumulative grade point average from the beginning of the re-enrollment or from the beginning of the new program. A change to a new program of study is defined as a change in declared major program, such as changing from arts and sciences to a vocational program, or changing from one vocational program to another vocational program.

A "New Start" means that all academic work completed prior to the designated "New Start" term will appear on the academic record but will not be considered for use in the cumulative grade point average.

The "New Start" is a one-time only option. If a student experiences difficulty in the new program, the student may not apply for a second "New Start". No grades are removed from the transcript by this program. Passing grades of 'C' or better earned prior to the "New Start" for courses which apply to the new program may be used in meeting graduation requirements but will not be calculated in the student's cumulative grade point average.

Since this program applies to Iowa Lakes Community College only, it will generally not affect decisions made by transfer institutions or grantors of financial aid. Such agencies will likely consider the student's complete academic record, not just the "New Start".

A "New Start" petition must be filed in the Records Office before or during the first term of enrollment in the new program, or after the return to a former program following the required absence. The petition for a "New Start" will be reviewed by the Records Office and will be implemented if the student has met all the guidelines. The student may appeal the denial of a "New Start" petition to the Academic Review Committee as provided by the academic appeal procedures listed in the student handbook. Once granted, the "New Start" may not be rescinded.

ACADEMIC SUPPORT PROGRAMS

Advisors

Advisors who teach in the students’ major area of interest help to guide academic programs and achieve educational goals. Students are encouraged to visit advisors.

Libraries

The mission of the campus libraries is to support the educational programs of the college. The libraries are comprehensive centers designed to meet the diverse needs of students, faculty, staff and area residents.

Developmental Studies

As an open door institution, Iowa Lakes Community College recognizes that some students may need assistance in basic skills areas. New students are assessed in English, reading and mathematics. Students who have been underprepared or who have been out of school for several years may need to review and sharpen basic skills prior to entering required college courses.

Developmental studies classes are designed to allow students to succeed in the programs they choose. These courses, however, do add an extra load to student requirements and may extend the program of study and/or require attendance at summer sessions. Questions concerning developmental studies should be discussed with advising/Success Center instructors or deans.

TRIO-SSS

A federally funded student support service program is available at Iowa Lakes. This program targets first generation, income eligible and disabled students. Services focus on increasing student success in college, including tutoring, college visits for transfer students, counseling and academic advising, plus general support.

Tutoring

Peer tutoring is available to all students on request through the advising/Success Centers.

STUDENT ASSISTANCE SERVICES

College Counseling Services

The Iowa Lakes Community College Counseling Program is focused on assisting students with strategies for academic success and retention. Educational Counselors specialize in student development through proactive programs focusing on personal/social development, transfer planning, academic development, and career development.

Student Handbook

The student handbook helps students to become informed about
the programs and services available at the college. Information about student life and college procedures are provided in a handy guide which is usually distributed during the orientation period at the beginning of the term.

Veterans’ Services
Services to veterans of the U. S. armed services are provided through the financial aid office. Qualified veterans are eligible to receive educational benefits in approved programs in all areas.

Students with Disabilities
Accommodations are provided based on student need. Services such as tutoring, counseling, note taking, readers and special equipment can be provided. All services are based on requests for services and appropriate documentation provided by the student. For more information, contact Jody Condon at 712-852-5219 or jcondon@iowalakes.edu.

Rehabilitation Services
An office of the state Department of Vocational Rehabilitation Service is available on campus in Emmetsburg and Estherville to assist clients of the program.

Student Housing
Housing at Iowa Lakes includes on campus units in Emmetsburg, Estherville and Spencer. For information about housing, contact the director/coordinator of housing at Emmetsburg, Estherville or Spencer campus. All students residing in college housing are required to participate in sessions pertaining to group living skills. To live in campus housing, students must be a full-time Iowa Lakes student enrolled in 12 or more hours. Please refer to the housing handbook to review housing procedures.

Off-campus housing information is available on the college Website at www.iowalakes.edu. Click on Student Life and Services, and then select Off-Campus Housing. Campuses in Emmetsburg, Estherville and Spencer also offer bulletin boards for posting of information for off-campus housing.

Student Centers
The student centers at Emmetsburg, Estherville and Spencer are the social, cultural and recreational hubs of the college. A cyber café, meeting rooms, television and game areas are provided. Student areas are available at Algona, and Spirit Lake.

The student centers offer a wide variety of food services ranging from café service and cafeteria meals to catered meals for dinners. Breakfast, noon and evening meals are served Monday through Friday in Emmetsburg and Estherville.

Campus Housing and Food Service Refunds
Students living in campus housing units who withdraw from college, who are asked to withdraw from college, or who move out of student housing for any reason still contractually owe rent for the remainder of the academic year. If students wish to terminate their contract prior to the start of the second semester will be held to the charge for the fall semester and there will be a termination charge of $600. The will be a credit for the unused food plan, minus one week. Termination of this contract after classes begin for the spring semester will result in full charge for the semester for room and credit for unused food plan, less one week.

During the regular terms, three meals per day are served in Estherville and Emmetsburg and two meals per day in Spencer, with the availability of weekend meal for students living in Estherville. Meal cards may be purchased by those students without a meal contract.

These procedures may be appealed if extenuating circumstances occur; see the student handbook or the housing director for more information. Any refunds that occur will be applied to outstanding balances with the balance being given to the student.

College Stores
College campus stores are located in Emmetsburg and Estherville. Hours for Emmetsburg and Estherville are Monday – Thursday 8:00-4:30; Friday 7:30-4:00 summer hours are posted.

Students are asked to bring their registration form to assist with the purchase of books. Instructors select required textbooks. New book prices are determined by publisher prices.

Payment is due at time of purchase. If a voucher is approved by Financial Aid, the voucher is accepted at the bookstore for a specific time only. Returns are accepted only with an add/drop slip, then only for the first week of classes. Books with shrink-wrap cannot be returned if removed from wrap. If the book contains a CD, DVD or access code, please do not break the seal since copyright laws do not allow the bookstore to make a refund. Buy back days are the last five days of each semester and the last day of each summer session. All supplemental materials must be included with books when they are returned.

The campus stores also sell supplies and college-identified items.

Parking
Ample parking is available at Iowa Lakes Community College. Parking for the handicapped is provided. Parking signs and regulations are enforced and tickets are issued for parking violations. Vehicles parked in restricted areas or in other than designated stalls may be towed at the owner’s/driver’s expense.

Health & Accident Insurance
Iowa Lakes Community College does not purchase or carry health and/or accident insurance on students. Information on purchasing a health and/or accident insurance policy from a private vendor is available in the campus business office. Iowa Lakes Community College nor its employees or representatives will be responsible for medical bills if/or when they advise a student to seek medical attention for an illness or injury.

Iowa Lakes Community College does not carry insurance to cover the theft of a student’s personal property. Therefore, neither Iowa Lakes Community College nor its employees or representatives will be responsible for the loss of student personal property by theft, fire, or any other means. Students are encouraged to obtain insurance for their personal property from their private insurance agency.

Job Placement
Instructors/coordinators of programs assist graduates in finding full-time jobs on completion of their programs. The financial aid office coordinates information concerning part-time jobs on campus for qualified students while they are attending Iowa Lakes.

Follow Up
The college conducts follow-up studies of graduates in order to ensure that instructional programs and courses are relevant to student needs and that students are adequately prepared for further educational study or entry into the world of work.

FINANCIAL AID
The purpose of financial aid is to assist students with the cost of education. All financial aid is awarded through the financial aid office. Students interested in financial aid must complete all admission requirements and complete the Free Application for Federal Student Aid (FAFSA) online at www.fafsa.ed.gov. Students are encouraged to file before April 1 of each year.

Pell Grant
A Federal Pell Grant, unlike a loan, does not have to be repaid. Pell Grants are only awarded to undergraduate students who have not earned a bachelor’s or professional degree. For many students, Pell Grants provide a foundation of financial aid to which other aid may be added.
Federal Supplemental Educational Opportunity Grant (FSEOG)
A FSEOG is for undergraduates with exceptional need, that is, students with the lowest Expected Family Contributions (EFC), and gives priority to students who receive Federal Pell Grants. FSEOG does not have to be paid back.

Federal Loans
A Subsidized Loan is awarded on the basis of financial need. If you qualify for a subsidized loan, the federal government pays interest on the loan (“subsidizes” the loan) until you begin repayment and during the authorized periods of deferment thereafter. An Unsubsidized Loan is not awarded on the basis of need. If you qualify for an unsubsidized loan, you will be charged interest from the time the loan is disbursed until it is paid in full. You can choose to pay the interest or allow it to accumulate. If you allow the interest to accumulate it will be capitalized, that is the interest will add to the principal amount of your loan and will increase the amount you have to repay. If you pay the interest as it accumulates, you will repay less in the long run.

Alternative Loans
Alternative Loan Programs are education funding opportunities that partner with students, colleges, and educational funding organizations such as banks to provide private loans to students and families who do not qualify for adequate amounts of state and federal student aid. Loan funds must be used for educational expenses (tuition, room, board, computer, etc.) or as determined by the school. See the financial aid office for information and/or counseling on whether Alternative Loans are the best option to fulfill your financial aid needs.

Parent Loan for Undergraduate Students (PLUS)
Parents may borrow for dependent undergraduate, graduate or professional students up to a maximum which equals the cost of the student’s program each year.

Work-Study
The work-study program provides jobs for students with financial need to earn money to help pay education expenses. The program encourages community service work related to your course of study.

Iowa Vocational-Technical Tuition Grant (IVTG) & Kibbie Grant
Need-based grants are available to Iowa residents who are vocational, technical and career option students at the area community colleges.

Other Financial Aid
Assistance to students needing help in financing education is also provided through veterans’ services, vocational rehabilitation, Job Service and the Iowa National Guard.

Scholarships
Over 150 scholarships are available at Iowa Lakes Community College. The process is entirely online. Access the application from the Alumni & Foundation web page. Students and prospective student completed applications are included in various scholarships according to question responses. Recommendations are ONLY accepted online, through the student application.

Presidential Scholar Honors Program
This program is an academic challenge structured for talented students. Freshman applicants recognized as honor students in high school, and returning sophomore honor students who have a cumulative average of 3.50 or above are invited to be members of the Presidential Honors Program.
Awards range from 60 percent to 100 percent tuition, depend-

STUDENT LIFE
The Iowa Lakes Community College experience is not by any means restricted to the classroom. Students participate in many co-curricular activities that are very much a part of their learning and growth. Since many of these activities, such as athletics and music, have headquarters at the Estherville campus, transportation is provided from other campuses when needed.

Athletics
The athletics program at Iowa Lakes Community College is an integral part of the total educational program. The program promotes physical growth and fitness, provides organized intercollegiate sports competition for student participation and community involvement, and allows a competitive feeling of achievement through sports participation. Intercollegiate athletics operate through the Estherville campus for students at any campus. Intramural athletics provide organized competition, individual tournaments and outdoor recreation for all students. Opportunities for fun, enjoyment and fellowship through participation in sports activities are sponsored at both Emmetsburg and Estherville.

Music
Iowa Lakes has numerous vocal and instrumental ensembles as well as recitals and coffeehouses to provide students with extensive solo or group performance opportunities. The music organizations in which students may participate are concert band, concert choir, jazz band, jazz singers, hand bell choir, men’s choir, women’s choir, woodwind ensemble, brass ensemble, and percussion ensemble. Opportunities for private lessons on piano, guitar, voice and many other instruments are available. Lessons are taught by highly qualified faculty. Lessons are open to all students and community members contingent upon the availability of faculty. The college also sponsors invitational jazz band contests, swing choir/jazz choir festivals and jazz band clinics which feature nationally known clinicians.

Student Organizations
The college encourages students to be active in college clubs and organizations. More than 30 student organizations reflect the wide range of student interest in pre-professional, social and special interest groups. A variety of clubs and organizations are available for student participation.

Student Senate
Through the student senate, students are provided an opportunity to participate in the operations of the college, both academically and socially. The senate’s objectives include providing a comprehensive activities program; addressing issues brought to it by students; encouraging the interaction and cooperation of students; and providing leadership in issues of citizenship and student rights.

STUDENT RIGHTS AND RESPONSIBILITIES
Academic institutions exist for the transmission of knowledge, the pursuit of truth, the development of students and the general well-being of society. Free inquiry and free expression are indispensable to the attainment of these goals.
Freedom to teach and freedom to learn are inseparable facets of academic freedom. The freedom to learn depends upon appropriate opportunities and conditions in the classroom, on the campus and in the larger community. Students should expect to exercise their freedom with responsibility. Those rights and responsibilities are published in the Student Handbook along with due process procedures for disciplinary actions.
Drug Prevention Program

Iowa Lakes complies with the Drug Free Schools and Communities Act of 1989 (PL 101-226) and provides a drug free institution that prohibits employees and students from unlawfully manufacturing, distributing, dispensing, possessing or using a controlled substance on its property or during any of its activities. Details on standards of conduct, legal sanctions, health risks and referral agencies are published in the Student Handbook or are available from campus business offices.

Crime Prevention on Campus and Completion/Graduation Rates:

The Student Right to Know and Campus Security Act of 1990 (PL 101-542), require colleges to collect, publish and distribute certain information concerning policies and procedures, including statistics relating to campus security and criminal actions on campus. This information is provided to all current students and employees in the Student Handbook and to applicants for admission or employment on request.

Additionally, the law (as amended by PL 102-26) requires colleges to report their completion/graduation rates on an annual basis, as well as specific information concerning athletes. This information is also published in the Student Handbook.

Institutional Record of Student Complaints

To comply with federal regulations, the college maintains records of formal, written student complaints filed with the offices of the chief executive officer, the chief academic officer, or the chief student services officer. These records will be maintained in the office of the Executive Dean of Students.

The Academic Year

The academic year for college transfer and career option consists of two semesters, beginning in August or September and in January, plus a summer session. The academic year for vocational and technical students normally consists of two semesters plus a summer term.

Continuing education programs are organized and scheduled to meet the needs and convenience of those requesting the programs.

Unit of Credit

The unit of college credit is the semester hour. A semester hour of credit is normally given for a minimum of one academic hour of classroom work for each week of the semester, two hours of scheduled laboratory work, three hours of scheduled clinical practice, or four academic hours of scheduled work experience, or the equivalent.

Classification of Credit Students

Freshman: a student who has completed fewer than 30 semester credits.

Sophomore: a student who has completed 30 or more semester credits.

Full-time: a student carrying 12 or more credits of college work in a regular term. Veterans must carry 12 or more hours to qualify for full educational benefits.

Half-time: a student carrying six or more credits of college work in a regular term.

CREDIT LOADS

Fall/Spring Terms

A liberal arts student may register for up to 19 credits if the previous term’s GPA was 2.50 or better; up to 21 credits if the last term’s GPA was 3.50 or better. A student is limited 18 credits or less if the previous term’s GPA was between 1.50 and 1.99 and limited to 12-14 credits or less if the previous term’s GPA was less than 1.50. A liberal arts student on strict probation will be restricted to 12-14 credits. Students in vocational or technical programs may take the amount of credit required for the program each term.

Summer Term

A student may register for up to 12 credits. For both first and second session courses a student may register for up to 6 credits.

A student may appeal the credit load restriction by preparing a written petition stating the reasons for the proposed exception, securing the signed consent of the faculty advisor and presenting the petition to the director of records and registration at least three days before the last day to add a course in a term.

Grading System

Grades are based on students’ levels of achievement in those courses in which they enroll. The following scale is used:

Grades for courses with attempted credits which count toward the grade point average:

A 4 honor points
B 3
C 2
D 1
F 0

Grades for courses with no attempted credits which do not count toward the grade point average:

P pass
Q not passing
T credit for testing
L credit for experiential learning

Other grade symbols which earn no credits or honor points:

I incomplete
W withdrawn
N audit
X repeated course (does not figure into GPA)

Grade descriptions:

A excellent
B above average
C average
D below average.
F fail: counts as attempted credit, no honor points.
I incomplete: assigned in cases where the student has not completed some portion of assigned course work during a regular term for extenuating circumstances such as illness, family emergency, etc. A change of grade will be accepted up to the end of the next term following the term in which the grade is issued.

W withdrawn: course formally dropped after the end of the first week of a term.

N audit: course taken for personal interest only; does not earn credits or grade. Must be elected during the first two weeks of a term.

P pass: course has been elected to be taken on a pass/no credit basis during the first two weeks in a term. Only one course may be so elected each term, except that all courses designated as developmental may be elected as pass/no credit. In addition, some courses are offered only on a pass/no credit basis. No more than one-fourth of the total credits required for graduation may be earned with P grades. A course which is being repeated may not be elected on a pass/no credit basis. Does not count as attempted credit.

Q not passing: a failing grade which earns no credit; can be issued only when a course is taken on a pass/no credit basis. Does not count as attempted credit.

T credit granted for testing. Does not count as attempted credit.

L credit granted by virtue of prior education or occupational experience. Does not count as attempted credit.

X only the last grade (ABCDF) will count for GPA and credit. The previous grade is replaced with an “X” to indicate it is a repeat and no longer counts for GPA and credit.

Mid-term temporary grades are distributed to students through advisors and the online portal system at the middle of each regular semester. Final grades are available to students through the portal at www.iowalakes.edu. Students who would like grades mailed must make that request to the Records Office each academic term. The college may also send grades for Postsecondary Enrollment Option students to the high school.

Graduation
Candidates for graduation must complete an application for graduation in order to receive their diploma. Students who do not complete requirements for graduation in the term for which they applied must submit a new application. Students who plan to participate in one of the annual commencement ceremonies must indicate their intent on the application for graduation. There is no graduation fee. Students who plan to receive more than one degree, diploma or certificate need to complete a graduation application for each program. The graduation application is available online at https://www.iowalakes.edu/registrar/graduation_application.htm

The graduation application should be completed by the following dates:

Fall October 1
Spring February 1
Summer June 1

Commencement ceremonies are held at the end of the spring and summer terms. Students who graduate at the end of fall are invited to participate in the annual commencement ceremony in May. Participation in commencement ceremonies is free of charge.

DEGREES, DIPLOMAS AND CERTIFICATES

Iowa Lakes Community College awards degrees, diplomas, and certificates to those individuals who successfully complete programs in arts and science, career option, vocational, technical or continuing education areas. The following degrees are awarded for college credit two-year programs: Associate of Arts, Associate in Science, and Associate in Applied Science. Diplomas are awarded for college credit vocational and technical programs of less than two years duration.

To be eligible for a degree or diploma in a credit program, a student must complete the last 15 credits before graduation in courses taken at Iowa Lakes. Certificates are issued to students who complete program requirements.
The General Education Core

General education is intended to provide breadth of learning to the community college experience. General education imparts common knowledge, promotes intellectual inquiry and stimulates the examination of different perspectives, thus enabling people to function effectively in a complex and changing world.

General education is not exclusively related to a student’s technical, vocational or professional field but is a part of a degree or diploma that prepares all students to meet personal, social and lifelong learning needs.

At Iowa Lakes Community College, general education encompasses curricular patterns and/or cognitive experiences appropriate to the length and content of the prescribed program. The general education requirements include college-level experiences which develop student capabilities in, and understanding of, (a) oral and written communication; (b) critical thinking; (c) numerical data; (d) scientific inquiry; (e) ethical, historical and social issues; and (f) appreciation for the fine arts.

The general education component at Iowa Lakes is developed at the institutional level through the faculty governance structure, using criteria appropriate to the institution’s mission, state guidelines and requirements of applicable accrediting bodies. Iowa Lakes Community College will continually clarify, articulate, publicize and assess its general education program. The general education requirement varies in accordance with the specific degree or diploma program in which the student enrolls.

Associate in Arts Transfer Degree Requirements

The Associate in Arts degree is designed to provide the first two years of a typical college or university bachelor’s degree program in liberal arts, general education, or pre-professional studies. Completion of the degree will satisfy all of the general requirements at several area colleges and universities and many of the requirements at other schools. To earn the Associate in Arts transfer degree, a student must:

- Earn a minimum of 64 semester credits, of which not more than 16 may be vocational or technical credits used as general electives and which may not be development education credits.
- Earn a minimum cumulative grade point average (GPA) of 2.00 or higher, using Iowa Lakes grade points earned divided by Iowa Lakes credits attempted for a standard letter grade, as defined elsewhere in this catalog.
- Complete the following general requirements, totaling 40 or more semester credits:

**Communications (10 semester credits):**
- ENG-105 Composition I 3
- ENG-106 Composition II 3
- SPC-103 Successful Learning 1
- SPC-101 Fundamentals of Oral Communication, ....or SPC-112 Public Speaking ......................... or SPC-122 Interpersonal Communications ....... 3

**Science (8 or more semester credits)**
- BIO-105 Introductory Biology 4
- BIO-112 General Biology I 4
- BIO-113 General Biology II 4
- BIO-141 Ecology & Environmental Concepts 4
- BIO-163 Essentials of Human Anatomy & Physiology 4
- BIO-168/173 Human Anatomy & Physiology I/II 4
- BIO-186 Microbiology 4
- BIO-248 Introduction to Bioscience 4
- BIO-300 Field Biology & Lab 4
- CHM-151 College Chemistry I 4
- CHM-152 College Chemistry II 4
- CHM-166 General Chemistry I 5
- CHM-176 General Chemistry II 5
- CHM-190 Introduction to Forensic Chemistry 4
- PHS-113 Introduction to Physical Science 4
- PHS-166 Meteorology, Weather& Climate 4
- PHS-187 Introduction to Earth Science 4
- PHY-162/172 College Physics I/II 4
- PHY-212/222 Classical Physics I/II 5

**Mathematics (5 or more semester credits)**
- MAT-110 Math for Liberal Arts 3
- MAT-120 College Algebra 3
- MAT-127 College Algebra & Trigonometry 5
- MAT-130 Trigonometry 3
- MAT-140 Finite Math 3
- MAT-156/157 Statistics OR BUS-211/212 Business Statistics 3,4
- MAT-210/211 Calculus I 4,5
- MAT-217 Calculus II 5
- MAT-218 Calculus III 3

(Some transfer colleges have higher minimum requirements, such as MAT-127)

**Social Science (9 semester credits from two or more areas)**

I  HIS-110/111 Western Civilization * 3
II  HIS-151/152 U.S. History 3
III  PSY-111 Intro to Psychology 3
PSY-121 Developmental Psychology 3
PSY-211 Psychology of Adjustment 3
PSY-241 Abnormal Psychology 3
PSY-251 Social Psychology 3

IV  ECO-120 Principles of Macroeconomics 3
ECO-130 Principles of Microeconomics 3

V SOC-110 Introduction to Sociology 3
SOC-115 Social Problems 3

VI  POL-111 American National Government 3
POL-112 American State & Local Government 3

VII  ANT-105 Cultural Anthropology 3

III  GEO-121 World Regional Geography 3
HIS-201 Iowa History 3
MMS-101 Mass Media * 3
POL-110 Introduction to Political Science 3
SOC-120 Marriage and Family 3
SOC-186 Contemporary Global Issues * 3
SOC-200 Minority Group Relations 3

**Humanities (9 semester credits from two or more areas)**

I  DRA-101 Introduction to Theatre 3
EDU-235 Children’s Literature 3
LIT-101 Introduction to Literature 3
LIT-110/111 American Literature 3
LIT-124 American Poetry 3
LIT-150/151 World Literature. I/II 3
LIT-161 The Short Story 3
LIT-184 Young Adult Literature 3

II  MUS-100 Music Appreciation 3
MUS-202 World Music 3
MUS-203 History of American Music 3
MUS-205 Jazz History & Appreciation 3

III  ART-101 Art Appreciation 3
ART-206 Art History 3
Earn a minimum of 64 semester credits, of which not
Earn a cumulative grade point average of 2.00 or higher.

(Select from AA degree computer courses)
Computers

Humanities

(Select from AA degree social sciences)
Social Science

(Select from AA degree science courses)
Mathematics & Science

SPC-122 Interpersonal Communications ........................................... 3
SPC-101 Fund.of Oral Communications ...........................or
SDV-103 Successful Learning ...................................................... 1

PLUS ELECTIVES TO TOTAL 64 SEMESTER CREDITS:
May include up to 16 vocational/technical credits; do not include
devotional courses or special needs courses.

The Collegiate Assessment of Academic Proficiency (CAAP)
will be used to assess the writing and mathematics skills of all
students enrolled in the Associate in Arts curriculum. The assess-
ment will be administered when the earned and currently enrolled
credit of the student totals 45 or more semester credits. The
student will not be charged the cost of assessment.

**Use credits for Social Science or Humanities requirements, not
for both.**

Computers (3 semester credits)
CSC-110 Intro to Computers .........................................................3
BCA-212 Intro to Comp Apps in Business .................................3
BCA-218 Advanced Microsoft Office Apps ...............................3

**Associate in Science Transfer**

**Degree Requirements**
The Associate in Science Transfer degree is designed to
provide the first two years of a typical college or university
bachelor’s degree program in mathematics, science, technical or
pre-professional studies. Completion of the degree will satisfy all
of the general requirements at several area colleges and universi-
ties and many of the requirements at other schools. To earn the
Associate in Science transfer degree, a student must:

- Earn a minimum of 64 semester credits, of which not
  more than 16 may be vocational or technical credits used
  as general electives and which may not be developmen-
tal education credits.
- Earn a cumulative grade point average of 2.00 or higher.
- Complete the following general requirements, totaling 40
  or more semester credits:

**Communications** (10 semester credits)
ENG-105 Composition I ......................................................... 3
ENG-106 Composition II ........................................................... 3
SDV-103 Successful Learning .................................................... 1
SPC-101 Fund.of Oral Communications ..............................or
SPC-112 Public Speaking .........................................................or
SPC-122 Interpersonal Communications ............ 3

**Science/Mathematics** (Take a minimum of 20 total credits of
Mathematics & Science. Must take one math and one science
course.)
(Select from AA degree science courses) ...................................... 20

**Social Science** (6 semester credits from two areas)
(Select from AA degree social sciences) ...................................... 3-3

**Humanities** (3 semester credits):
(Select from AA degree humanities courses) ............................. 3

**Computers** (3 semester credits)
(Select from AA degree computer courses) ............................... 3

**Associate in Applied Science Degree Requirements**
The Associate in Applied Science degree is awarded to stu-
dents who complete two-year technology curricula. Each program
has specific course requirements; all programs require a 2.00 or
better GPA for graduation. Some arts and science courses may
apply to AAS degree requirements in specific programs. Credits
earned toward an Associate in Applied Science degree may be
transferable to some baccalaureate degree granting institutions,
but only at the option of those institutions.

Minimum program requirements total at least 68 semester
credits and general requirements include a writing course and an
oral communications course or a course combining both; a math-
ematics course and a related or applied science course; a social
science course such as applied psychology or sociology or human
relations; a related business or computer applications course.

**Diploma Requirements**
Diplomas are issued to students who complete full-time voca-
tional curricula of at least one academic year but less than two
years in length. Specific course requirements must be met and a
2.00 or better GPA is required.

Minimum requirements total at least 34 semester credits and
general requirements include a minimum of one writing course
and an oral communications course or a course combining both;
an applied mathematics or applied science course; and a human
relations course.

**Certificate Requirements**
Students enrolled in adult vocational or adult general educa-
tion courses receive certificates signifying satisfactory completion
of the program of instruction. Students must attend at least 70
percent of the class sessions and complete the course work ac-
cording to the instructor’s standards.

**Iowa High School Equivalency Certificate Requirements**
The Iowa Department of Education will issue a High School
Equivalency Diploma (HSED) to any student who passes the
required battery of HiSET™ (High School Equivalency Test) tests
in the following five areas; Language Arts-Reading, Language
Arts-Writing, Mathematics, Science, and Social Studies. Once
ready for Official HiSET™ Testing, students must meet three Hi-
SET™ criteria to complete the requirements for their equivalency
diploma; Score 8 out of 20 on each of the five subtests, Score at
least 2 out of 6 on the writing essay, and Achieve a total scaled
score on all five HiSET™ subtests of at least 45 out of 100.

Prior to Official HiSET™ testing for their diploma, students are re-
quired to complete an Adult Education & Literacy Program (AEL)
registration, a pre-test assessment, attend at least one explicit in-
struction course, attend at least 70 hours of instruction, complete
a post-test assessment, and meet the requirements for Official
Practice Tests. Without exception, all must be completed prior to
any diploma testing. Instruction in the Iowa Lakes’ AEL Program
is FREE, and students are allowed to receive as many hours of
instruction as necessary to prepare them for HiSET™ testing. Ad-
ditionally, students cannot be enrolled in any high school to be in
the AEL Program at Iowa Lakes. Students may begin the program
at 16 but cannot begin testing until they are 17 and will not receive
their official diploma until May of the year they would have gradu-
ated from high school.

**In 2014, the State of Iowa switched from using the well-known
GED® testing service to now using HiSET™. The equivalency
diploma is the same credential issued from the Iowa Department
of Education.**
Further information is available from the two Iowa Lakes Community College Testing Centers or through any of the five Advising/Success Centers.

PROCEDURES FOR ACADEMIC CLASSES

Registration

Registration consists of program planning, scheduling of classes through consultation with an advisor, and paying tuition and fees to the college. New students who are enrolling for the first time in the fall are invited to attend an orientation-registration program in the summer. Preregistration is scheduled prior to the beginning of each term. Regular registration dates and the last date to register are published each term. A current permanent email and/or mailing address must be on file as part of registration and must be kept up to date. Information sent to the address on file will be considered to be proper notification to the student. Registration for courses may also be completed online.

Change of Registration

A “change of registration” form must be completed and submitted to the business office to make any change in registration. Courses may be added during the first two weeks of a session; after the first week, the instructor and director of records and registration must approve. Courses may be dropped at any time prior to the last four weeks of a course in a regular length term. Dates are pro-rated for shorter terms.

Withdrawing from All Classes

Please refer to the calendar or college website for specific dates. It is the student’s responsibility to initiate a formal drop. After the first ten days of full term classes, a "W" grade will be assigned for each course. Students who receive financial aid must complete a financial aid exit interview, and may be responsible for repaying financial aid proceeds. (See Refund of Tuition – Federal Financial Aid/Title IV Funds.) The date the institution determines that the student withdrew varies depending on the type of withdrawal. For example, if a student initiates the “official withdrawal” process or provides notification to the institution of their intent to withdraw, the date the institution determines that the student withdrew would be the date the student began the official withdrawal process, or the date the student notified the institution, whichever is first. If a student did not begin the official withdrawal process or provide notification of his or her intent to withdraw, an "unofficial withdrawal" occurs and the institution establishes the withdrawal date as either the midpoint of the semester or the last date of attendance at an academically-related activity.

If a student earns a passing grade in one or more of their classes, an institution is permitted to make the presumption that the student completed the course requirements and may consider the student to have completed the period.

If a student fails to earn a passing grade in at least one class the student is enrolled, the withdrawal date is either the midpoint of the semester or the last date of attendance at an academically-related activity. In addition, a student who unofficially withdraws and receives failed grades (F) recorded on their academic transcript, may be ineligible for financial aid.

Refund of Tuition

Refund of Tuition (When there is NO Federal Financial Aid Resources): In the event a student withdraws from a course, the student will receive a refund based on the dates of the courses enrolled. Refunds are calculated on the total tuition paid. If a student received Federal Financial Aid, please read the next section. (Please refer to the class schedule book for specific dates.)

Refund Schedule

<table>
<thead>
<tr>
<th>Normal/full-length semester classes</th>
<th>8 week classes</th>
<th>First five days of class</th>
<th>After day 5</th>
<th>No refund</th>
</tr>
</thead>
<tbody>
<tr>
<td>First ten class days of semester</td>
<td>100% tuition refund</td>
<td>100% tuition refund</td>
<td>100% tuition refund</td>
<td>100% tuition refund</td>
</tr>
<tr>
<td>After day 10</td>
<td>No refund</td>
<td>No refund</td>
<td>No refund</td>
<td>No refund</td>
</tr>
</tbody>
</table>

ECollege/online courses and other special course schedules differ; beginning dates and refund dates vary. Compressed course drops are cancelled with refund only before second class meeting starts. A student who registers but later is unable to attend must notify the college before the last date to cancel the course(s) or program to avoid charges and/or grades. Some exceptions may apply.

Refund of Tuition (Federal Financial Aid/Title IV Funds): Refunds of tuition will be calculated based on the refund policy. The student’s account balance may be affected by the financial aid adjustment that occurs after the Return to Title IV calculation. “Return to Title IV Funds” (Federal Financial Aid) formula dictates the amount of Federal Financial Aid that must be returned to the government by the student. This formula is applicable to any student receiving any type of federal aid other than Federal Work Study if that student withdraws before the 60% completion point of the semester. If funds are released to a student or their account, the student may be required to repay some of the federal grants and loans. Generally the law states (section 485 of the Higher Education Amendments of 1998—P.L./105-244) that the amount of assistance the student has received is determined on a prorated basis, in relationship to the specific term and the amount of the term completed. Students can calculate their liability by logging on to www.r24.com and selecting the “continue” button. Students need to contact the Financial Aid Office for an exit interview and to verify the accuracy of their calculation. (See “Withdrawing from College” for related information.)

Important: Iowa Lakes Community College reserves the right to change the Refund Schedule at any time.

Credit Assignment in Emergency Situations

Upon request of the student and after the two-thirds point of a term, the student may be given grades and credit for all courses in progress at the time of a personal emergency such as serious personal or family illness or injury requiring the student to discontinue studies, a death in the immediate family, or other circumstances that preclude a student finishing the term. The instructor of each course and a dean must approve the grade and credit.

Options in Credit and Grading

A change from credit to audit or audit to credit status may be made during the first two weeks of a term if the permission of the director of records and registration is granted. A change from traditional to pass/no credit (P/Q) grading may also be made during the first two weeks of a term if the instructor and director of records and registration approve. Some restrictions apply; see the section on “grading system.” A shorter option period applies for shorter terms.

Tuition and Fees

Students are encouraged to make full payment of tuition and fees by the first day of classes each term. Debit cards, VISA, MasterCard and Discover credit cards are accepted for payment of tuition, fees and bookstore charges. You may also provide information for automatic withdrawals from your checking/savings accounts. For those for whom full payment is not possible, a deferred payment plan is available. Textbook charges and aviation flight fees
may not be deferred.

If a payment for tuition and fees is not received by the college by the due date, the college may drop the student from all classes with an "administrative drop." The student may not attend classes until payment of overdue tuition and fees and a $25.00 reinstatement fee are received. No student may register in any new term that has a prior indebtedness to the college, and official transcripts and diplomas will be withheld.

Iowa Lakes Community College participates in the DAS (Department of Administrative Services) Offset Program. Participation in the Offset Program is an attempt to collect a past due account. It allows Iowa Lakes Community College to offset state payments, for example state tax returns, but is not limited to tax returns.

TRANSFER OF CREDIT AND OTHER WAYS OF EARNING CREDIT

Iowa Lakes will accept credit from other institutions of higher education and will grant credit for other forms of extra institutional learning if such credit is determined to be generally equivalent to the credit awarded for work in residence at Iowa Lakes, can be documented in an appropriate manner, and applies to the student's program of study and toward his or her educational goals.

One of the other methods includes test out, such as the College Level Examination Program (CLEP).

Credit accepted at Iowa Lakes in transfer will not necessarily transfer to another institution in the same manner because most colleges evaluate transfer credit themselves. In addition, credit granted at Iowa Lakes for test out, experiential learning, or other non-traditional forms of instruction may transfer if it qualifies under the policies and procedures for granting such credit at the receiving institution.

Working closely with an advisor and any college or university to which a student wishes to transfer will be important to the planning process. Students are responsible for taking the courses they need to meet their graduation and transfer requirements, but advisors can help smooth the process.

Additional information is available from a counselor's office, the Advising/Success Center, the records office, and from executive deans or advisors.

Inter-Institutional Transfer of Credit

Iowa Lakes will accept credit transferred from other nationally or regionally accredited institutions of higher education provided that an official transcript is received directly from the institution, the grades are satisfactory, and that the courses apply toward the student's field of study. A grade of 'C' or better, or its equivalent, is considered to be satisfactory.

Credit from non-regionally accredited institutions may be transferable to Iowa Lakes based on accreditation by a specialized or professional accrediting organization; comparability of the nature, content and level of the credit offered, as determined by Iowa Lakes administration and faculty; and the appropriateness and applicability of the credit earned to the student's current program of study.

Credit for Military Service

Credit may be granted for military experience in the following instances:

- two credits in physical education for a year or more of active duty.
- credit for DANTES or USAFI courses with acceptable scores or grades.
- service school courses
- military specialties (MOS, NER, etc.)
- Review of Joint Services transcript &/or Community College of the Air Force transcripts

A recommendation of the American Council on Education is one of the methods used in determining possible credit for military experience. Applicability to the student's program of study is also considered.

Credit for Extra-institutional and Experiential Learning

Iowa Lakes may grant credit for formally structured courses offered by non-collegiate sponsors such as businesses, corporations, governmental agencies, unions and professional groups. College credit recommendations published by the National Program on Non-collegiate Sponsored Instruction (through the Regents of the State University of New York) and The National Guide to Educational Credit for Training Programs (through the American Council on Education) are used as guidelines for the awarding of credit.

Industry certifications and continuing education records of completion may be presented as part of the needed documentation in an application for consideration of prior learning towards college credit.

Credit may be granted to an Iowa Lakes student for learning gained through work experience or personal study, if the student can document that this learning meets the competencies of the course for which credit is requested. Credit may be awarded only for a course listed in the current college catalog. General education courses and any course in which a CLEP exam is offered are not eligible for credit for work experience or personal study.

- The student, upon recommendation of the instructor and advisor, presents a written proposal to a campus dean/director and an instructor responsible for teaching the course in question, requesting credit for that course. Supporting materials must accompany that request, including a complete description of the prior learning, supervisory verification if available and a description of the competencies achieved.
- If the instructor evaluates the proposal as having merit, the instructor will present the proposal to a campus dean/director for permission for the student to contract for the course credit.
- The student and instructor will develop a performance contract to document prior learning, competency in the course objectives, and define a time line for portfolio completion. Upon acceptance of documentation and successful completion of written and practical examinations on course competencies, the student will pay the appropriate charges.
- Instructor verification that the student is to receive credit for the course is submitted to the director of records and registration and a grade of 'L' is recorded on the academic record.

Credit by Examination

Credit may be earned by examination at Iowa Lakes through the following methods:

- The ACT PREP examinations
- selected DANTES examinations
- "challenge" examinations for specific Iowa Lakes courses which are developed and graded by the appropriate academic department.
- The College Level Examination Program (CLEP) for general and certain subject examinations.

Certain requirements must be met and Iowa Lakes specifies acceptable scores for each examination. For further information, contact the testing personnel at one of the Iowa Lakes Advising/Success Centers.

Other Information

A minimum of 12 semester credits must be earned in resi-
Academic, Financial Aid and Residency

Appeals Process

Informal: It is the desire of the college that any difficulties or confusion a student may encounter with the policies or regulations of the college be handled in an informal manner whenever possible. Students are encouraged to talk to their advisors, instructors, Director of Distance Education, or the campus dean to resolve issues as they arise. Questions about financial aid may be asked of the director of financial aid. Questions about academic requirements, policy or procedures may be asked of the registrar, who also handles changes of residency.

Formal: If a student feels that extenuating circumstances might justify the waiver of a particular college policy, application, procedure or regulation as interpreted by a college employee, an appeal may be made to the Academic Review Committee. The Academic Review Committee considers all initial appeals to waive the application of college policies and procedures concerning academic actions, financial aid or residency decisions. (Academic actions include, but are not limited to, academic probation or suspension, procedures, program or degree requirements, or grades allegedly given in error by faculty members.)

Appeal Procedure

A. A student initiates an appeal by making a written statement to the Academic Review Committee, delivered to the registrar. The appeal must be filed with the Records Office no later than 24 months from the end date of the semester in which the grievance occurred. The statement should provide a description of the problem as well as the desired solution, along with any supporting information the student believes will be helpful. The student may request written involvement by faculty members, advisors, or others in support of the case.

B. If the student is dissatisfied with the committee’s decision, a further appeal may then be made in person before the committee. The student may have others appear in support of the petition. If a personal appeal is not requested within thirty (30) days of the previous committee decision, that decision becomes final.

C. If a student has completed both the written and personal appeal processes above, the decision of the committee may be appealed to the campus dean. If the campus dean’s decision is consistent with the Academic Review Committee’s decision, the student may then appeal to the chief academic officer. If the student continues to be dissatisfied, he or she may appeal to the college president or designee, whose decision will be final. Failure to initiate this level of appeal within thirty (30) days of the notification of the committee’s action shall result in the committee’s last decision becoming final.

Directory Information

Iowa Lakes considers the following to be directory information and will release it unless the student requests the college not do so by the end of the second week of classes each term: name, addresses, telephone numbers, e-mail address, date and place of birth, major field of study, classification, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, academic honors awarded, and the most recent previous educational agency or institution attended. Any request to limit directory information must be made to the
director of records and registration. The college will not notify a student of requests for directory information if the student has requested withholding it; Iowa Lakes will not be responsible if disclosure would have been to the student’s benefit. Students not currently enrolled may not restrict directory information. Directory information is released only on an individual basis; lists of students are not available. A request to withhold any item of directory information will normally result in the college withholding all information.

Students’ Right to Review

Students have the right to inspect and review information contained in their education records. A student must make a written request to the director of records and registration listing the item or items of interest. The college will respond to the request within 45 days. Further information about the content of the educational record and the right to challenge portions which the student feels are incorrect is available in the records and registration offices at Emmetsburg or Estherville.

Requests for Transcripts

A transcript of credit courses taken at Iowa Lakes Community College is issued to a third party only upon written request by the student. Forms for this purpose are available at all campuses as well as the college web site: www.iowalakes.edu. A signed letter is also acceptable and may be sent by mail or facsimile (FAX). Transcripts are normally sent out within a few days of the request; at the end of a term it takes longer to post grades and degrees on records. All transcripts are processed at the Estherville campus. Iowa Lakes Records, 300 South 18th St. Estherville, IA 51334, 712-362-7922 or FAX 712-362-8363.

There is no charge for transcripts sent by regular mail service. Same day, FAX, and similar special services incur charges. Contact the records office for the special service fees. Transcripts are not released if the student has an overdue financial obligation to the college.

TRANSFER TO OTHER INSTITUTIONS

Students who plan to transfer to another institution after the completion of their study at Iowa Lakes should plan early to meet the requirements of the institution to which they plan to transfer. Iowa Lakes advisors and counselors will help students meet their educational goals. Students are also urged to work closely with the school to which they will transfer to be sure that courses will transfer and that requirements will be met.

Students who plan to transfer to a four-year college should be aware that many schools have increased the level of mathematics competency required for graduation to the level of college algebra or higher. This requirement also applies to community college graduates with the A.A. degree, even though the A.A. degree may meet the four-year college general requirements. Some colleges are now requiring a foreign language and some require that science courses also include laboratory work. Students who take college level work as high school students who use the credit for high school graduation requirements should be aware that some colleges will not allow that credit to count toward a college degree.

Credit granted at Iowa Lakes for test-out, experiential learning or other non-traditional forms of instruction may transfer if it qualifies under the policies at the receiving institution. An official transcript of Iowa Lakes work should be sent to the transfer institution when the school asks for it.

MINNESOTA OFFICE OF HIGHER EDUCATION

Iowa Lakes Community College is registered as a private institution with the Minnesota Office of Higher Education pursuant to Minnesota Statutes, sections 136A.61 to 136A.71. Registration is not an endorsement of the institution. Credits earned at the institution may not transfer to all other institutions.

CONTINUING EDUCATION

Iowa Lakes Community College is aware that education is a lifelong activity and provides preparatory, upgrading and enriching continuing education courses for those residents who want, need and can benefit from such training. A comprehensive schedule which provides area residents with the opportunity to participate in programs and activities meet their needs. Working directly with communities and area businesses, the division provides short courses, programs, and seminars in a timely manner.

Adult Basic Education

This program provides adults with a ‘second chance’ to learn and/or brush up on basic skills such as reading, writing, computation, and balancing a checking account. Classes are offered at various locations throughout the areas served by the college.

Vocational Supplemental Courses

Courses in this category are designed to increase the skills and understandings needed by adult workers who are already employed but want to upgrade or update their occupational competencies. The target population for these courses is the working adult.

Needs are identified by several methods. Individuals or groups may request a specific course which they need. Agencies, organizations, businesses and industries may make requests. Advisory committees also propose courses and programs, such as those for nursing or building maintenance supervisors. Licensing boards also assist in identifying needs.

COMMUNITY SERVICE

AND SERVICE LEARNING

A community service program is designed to promote agricultural, business, industrial, recreational, cultural and social development. This includes providing leadership in solving community problems, serving new constituents, and making college facilities available.

Service learning at Iowa Lakes is a method of teaching and learning which engages students in solving problems and addressing local needs within the college or the community as part of their comprehensive educational program. Service learning combines academic curriculum with service in a college or community service project.

Iowa Lakes Community College is also involved in community service projects such as the Retired and Senior Volunteer Program (RSVP), the Small Business Development Center and health related programs.

ENGLISH AS A SECOND LANGUAGE

Designed to teach English to those people for whom it is not the primary language, this program has assisted migrant and refugee peoples who have moved into the area. Emphasis is on English for daily living and on-the-job language requirements.
EXTENDED LEARNING

Postsecondary Enrollment Options Act

Iowa Lakes Community College welcomes and encourages qualified high school students to enroll in college-level classes and looks forward to serving their needs. To facilitate the Postsecondary Enrollment Options Act, Iowa Lakes has established the following guidelines.

Students must complete and submit the following information before the semester in which they plan to enroll:

a) An official high school transcript
b) Accuplacer or ACT score
c) A signed Iowa Lakes High School registration form (available from high school counselor)

All high school registration forms require a high school administrator, parent and student signature or registration is considered incomplete. A new registration form must be completed for each semester.

Each student must take an Accuplacer or ACT test to enroll in an Iowa Lakes course. There is a minimum score that must be reached on the test in order to enroll in any writing or math course.

Students receiving low scores are encouraged to return to their local high school to upgrade their skills. If no means are available at the high school level to improve those skills, the student may enroll in an Iowa Lakes developmental class, but not regular college classes, until the required developmental courses have been completed satisfactorily.

Under the Postsecondary Enrollment Options Act, the local school district assumes responsibility for tuition. The law further requires the student or parent to reimburse the local district if he/she fails to complete the course or receive adequate credit.

The student is responsible for withdrawing officially if enrollment ceases during the term for any reason. Withdrawal and refund policies and procedures are detailed elsewhere in this catalog.

All information regarding PSEO classes is available through the high school guidance counselor.

Third Age College

The Third Age College is an educational organization that provides an academic setting to enrich the lives of individuals over the age of 55 and interested others. The term “third age” is borrowed from the French and indicates productivity during retirement rather than this “age” becoming the mere closure of life.

Classes focus on academics rather than leisure and pleasure. A variety of topics and subject areas are covered in courses.
Two-year technical programs are designed to prepare students for successful job entry. The Associate in Applied Science degree is awarded on completion. Some courses may be transferable to other colleges.

Programs are available in the following areas:

- Accounting Specialist
- Administrative Assistant
- Agribusiness Technology
- Agriculture Production Technology
- Associate Degree Nursing
- Automotive Collision and Paint Technology
- Automotive Technology
- Aviation/Airport Management
- Business Administration & Management
- Computer Programming
- Construction Technology
- Criminal Justice
- Digital, Social & Broadcast Productions
- Early Childhood Education
- Electrical Technology
- Engineering Technology
- Environmental Studies
- Farm Equipment and Diesel Technology
- Game Design & Development
- Graphic Design
- Heating, Ventilation & Air Conditioning Technology
- Hotel and Restaurant Management
- Human Services/Disability Studies
- Marine Service Technology
- Paralegal/Legal Studies
- Powersports & Power Equipment Technology
- Sales & Marketing Management
- Substance Abuse Counseling
- Surgical Technology
- Veterinary Technician
- Water Quality & Sustainable Aquatic Resources
- Web Development & Design
- Wind Energy and Turbine Technology

**ACCOUNTING SPECIALIST**

(AAS -- 70 credits)

**Term 1 (17.00 credits)**

ACC 131 - Principles of Accounting I (4.00)
ACC 161 - Payroll Accounting (3.00)
BUS 175 - Business Seminar I (1.00)
CSC 110 - Introduction to Computers (3.00)
ENG 105 - English Composition I (3.00)
MAT 110 - Math for Liberal Arts (3.00)

**Term 2 (19.00 credits)**

ACC 132 - Principles of Accounting II (4.00)
ACC 310 - Computer Accounting (2.00) or
ACC 311 - Computer Accounting (3.00)
BUS 211 - Business Statistics (4.00)
SPC 101 - Fundamentals of Oral Communication (3.00)

**Term 3 (3.00 credits)**

ACC 941 - Practicum (3.00) or
ENG 106 - English Composition II (3.00)

**Term 4 (15.00 credits)**

ACC 231 - Intermediate Accounting I (4.00)
ACC 221 - Cost Accounting (3.00)
ACC 261 - Income Tax Accounting (3.00)
ACC 929 - Individual Projects (2.00)
ECN 120 - Macroeconomics (3.00)

**ADMINISTRATIVE ASSISTANT**

(AAS -- 68 credits)

**Term 1 (16.00 credits)**

ACC 131 - Principles of Accounting I (4.00) or
ACC 111 - Introduction to Accounting (3.00)
ADM 116 - Keyboarding II (3.00)
ADM 132 - Business Math and Calculators (2.00)
ADM 254 - Business Professionalism (1.00)
CSC 110 - Introduction to Computers (3.00)

**Term 2 (16.00 credits)**

ADM 162 - Office Procedures (3.00)
ADM 255 - Business Professionalism II (1.00)
BCA 134 - Word Processing (3.00)
ENG 105 - English Composition I (3.00)
Choose 6 elective credits, suggest:
BCA 185 - Beginning Webpage Development (3.00)
ACC 161 - Payroll Accounting (3.00)

**Term 3 (16.00 credits)**

ADM 354 - Business Professionalism III (1.00)
ADM 941 - Practicum (5.00)
MAT 110 - Math for Liberal Arts (3.00)
Science (4.00)
Social Science (3.00)

**Term 4 (20.00 credits)**

ADM 355 - Business Professionalism IV (1.00)
BUS 161 - Human Relations (3.00)
ENG 106 - English Composition II (3.00)
Business Elective (3.00)
Humanities (3.00)
Social Science (3.00)
Science (4.00)
AGRIBUSINESS TECHNOLOGY
(AAS -- 78 credits)

Term 1 (17.00 credits)
AGC 111 - Basic First Aide and Life Support (1.00)
AGA 154 - Fundamentals of Soil Science (3.00)
AGC 103 - Ag Computers (3.00)
AGS 114 - Survey of the Animal Industry (2.00)
AGC 936 - Occupational Experience (3.00)
AGA, AGC, AGS, choose from (2.00)
BUS 161 - Human Relations (3.00)

Term 2 (17.00 credits)
AGA 284 - Pesticide Application Certification (3.00)
AGC 114 - Principles of Agronomy (3.00)
AGC 937 - Occupational Experience II (3.00)
AGS 319 - Animal Nutrition (3.00)
AGM 203 - Agricultural Welding (2.00)
COM 781 - Written Comm in the Workplace (3.00) or
ENG 105 - English Composition I (3.00)

Term 3 (12.00 credits)
AGC 317 - Agricultural Field Studies (1.00)
AGB 437 - Commodity Marketing (3.00)
AGA 375 - Integrated Crop Management (2.00)
AGA, AGC, AGS choose from (3.00)
MAT 772 - Applied Math (3.00) or
MAT 110 - Math for Liberal Arts (3.00)

Term 4 (18.00 credits)
AGA 352 - Soil Science and Fertilizer (2.00)
ACC 111 - Introduction to Accounting (3.00)
AGB 327 - Principles of Farm Business Mngt (2.00)
AGM 102 - Farm Equipment Maintenance (1.00) or
AGP 242 - Precision Agricultural Applications (2.00)
AGC 938 - Occupational Experience III (3.00)
COM 781 - Written Comm in the Workplace or
ENG 105 - English Composition I (3.00)
SPC 101 - Fundamentals of Oral Communication (3.00)
AGA,AGB,AGC,AGS choose from: (1.00)

Term 5 (15.00 credits)
AGB 466 - Agricultural Finance (3.00)
AGC 210 - Employment Seminar (1.00)
AGA,AGB,AGC,AGS choose from: (11.00)

ASSOCIATE DEGREE NURSING
(AAS -- 85 credits)

Must be completed before starting program
BIO 168 - Human Anatomy & Physiology I (4.00)
BIO 105 - Intro Biology (4.00)
CHM 151 - College Chemistry I (4.00)
PSY 111 - Intro to Psychology (3.00)

Term 1 (17.00 credits)
ADN 111 - Nursing Concepts I (7.00)
HSC 151 - Dosage Calculations (1.00)
BIO 173 - Human Anatomy & Physiology II (4.00)
HSC 202 - Health Informatics (2.00)
BIO 151 - Nutrition (3.00)

Term 2 (14.00 credits)
ADN 212 - Nursing Concepts II (7.00)
ADN 213 - Pharmacology Aps (4.00)
PSY 121 - Developmental Psychology (3.00)

Term 3 (14.00 credits)
BIO 186 - Microbiology & Lab (4.00)
ENG 105 - English Composition I (3.00)
MAT 157 - Statistics (4.00) or
MAT 121 - College Algebra
SPC 101 - Fundamentals of Oral Communication (3.00)

Term 4 (14.00 credits)
ADN 314 - Nursing Concepts III (7.00)
ADN 413 - Behavioral Health Concepts (4.00) or
ADN 414- Maternal/Newborn Concepts
ENG 106 - Composition II (3.00)

Term 5 (11.00 credits)
ADN 414 - Maternal/Newborn Concepts (4.00) or
ADN 413 - Behavioral Health Concepts
ADN 415 - Nursing Concepts IV (7.00)
AUTO COLLISION AND PAINT
REPAIR TECHNOLOGY
(AAS -- 76 credits)

Term 1 (21.00 credits)
CRR 302 - Introduction to Collision Repair (2.00)
BUS 161 - Human Relations (3.00)
CRR 326 - Sheet Metal Repair Theory (3.00)
CRR 327 - Sheet Metal Repair Lab (2.00)
CRR 421 - Non-Structural Repair Theory (3.00)
CRR 422 - Non-Structural Repair Lab (2.00)
CRR 203 - Plastic Repair Theory (2.00)
CRR 351 - Collision Lab I (2.00)
WEL 334 - Trade and Industry Welding (2.00)

Term 2 (16.00 credits)
CRR 742 - Estimating Theory (2.00)
CRR 749 - Estimating Lab (1.00)
CRR 809 - Introduction to Refinishing Theory (1.00)
CRR 809 - Introduction to Refinishing Lab (3.00)
CRR 838 - Refinishing II Theory (2.00)
CRR 839 - Refinishing II Lab (3.00)
COM 725 - Workplace Communications (2.00)
CRR 908 - Cooperative Education (2.00)

Term 3 (12.00 credits)
CRR 540 - Structural Repair Theory (3.00)
CRR 541 - Structural Repair Lab (2.00)
CRR 606 - Mechanical Repairs Theory (2.00)
CRR 607 - Mechanical Repairs Lab (1.00)
CRR 352 - Collision Repair Lab II (2.00)
MAT 770 - Applied Math (2.00)

Term 4 (15.00 credits)
ACC 111 - Introduction to Accounting (3.00) or
ACC 131 - Principles of Accounting I (4.00)
Choose from: BUS 183 - Business Law (3.00)
MKT 110 - Principles of Marketing (3.00)
BUS 126 - Business Principles (3.00) or
MGT 101 - Principles of Management (3.00)
CSC 110 - Introduction to Computers (3.00)
ENG 105 - Composition I (3.00)
SPC 101 - Fundamentals of Oral Communication (3.00)

Term 5 (12.00 credits)
Restricted Electives (12.00)

AUTOMOTIVE TECHNOLOGY
(AAS--82 credits)

Term 1 (17.00 credits)
AUT 115 - Automotive Shop Safety (1.00)
AUT 105 - Introduction to Automotive Technology (4.00)
AUT 630 - Automotive Electrical Systems (5.00)
AUT 624 - Automotive Electrical Systems Lab (5.00)
WEL 334 - Trade and Industry Welding (2.00)

Term 2 (18.00 credits)
AUT 180 - Engine Repair Theory (3.00)
AUT 186 - Engine Repair Lab (3.00)
AUT 510 - Brakes Theory (2.00)
AUT 184 - Engine Repair Lab (3.00)
AUT 704 - Auto Heating and Air Conditioning (4.00)
COM 723 - Workplace Communications (3.00)

Term 3 (10.00 credits)
AUT 412 - Automotive Suspension and Steering (3.00)
AUT 413 - Auto Suspension and Steering Lab (3.00)
AUT 890 - Auto Tech On-the-Job Training (4.00)

Term 4 (19.00 credits)
AUT 260 - Manual Transmission Theory (3.00)
AUT 313 - Auto Manual Drive Train and Axles Lab (3.00)
AUT 212 - Auto Automatic Transmissions/Transaxles Theory (4.00)
AUT 213 - Automotive AutoTransmissions/Transaxles Lab (3.00)
BUS 161 - Human Relations (3.00)
MAT 772 - Applied Math (3.00)

Term 5 (18.00 credits)
AUT 851 - Auto Engine Performance Diagnosis (3.00)
AUT 834 - Automotive Fuel Systems (4.00)
AUT 827 - Automotive Ignition Systems (4.00)
AUT 842 - Auto Computerized Engine Controls (4.00)
BUS 126 - Business Principles (3.00)

AVIATION/AIRPORT MANAGEMENT
(AAS -- 68 credits)

Term 1 (17.00 credits)
AVI 140 - Private Pilot Ground School (4.00)
AVI 180 - Private Pilot Flight Lab I (3.00) or
AVI 112 - Sport Pilot Ground School (3.00) and
AVI 113 - Sport Pilot Flight Lab (2.00) and
AVI 114 - Sport/Private Pilot Bridge Lab (1.00)
ENG 105 - English Composition I (3.00)
Meteorology, Weather and Climate (4.00)
Humanities (3.00)

Term 2 (19.00 credits)
AVI 261 - Commercial Pilot Ground School (3.00)
AVI 245 - Commercial/Inst Cross Country Flight Lab (3.00)
MAT 110 - Math for Liberal Arts (3.00)
Math (3.00)
Science (4.00)
Social Science (3.00)

Term 3 (16.00 credits)
AVI 212 - Instrument Pilot Ground School (4.00)
AVI 246 - Commercial/Instrument Flight Lab (3.00)
CSC 110 - Introduction to Computers (3.00) or
SPC 101 - Fundamentals of Oral Communication (3.00)
Business Elective (3.00)
Social Science (3.00)

Term 4 (16.00 credits)
Choose from instructor approved electives (7.00)
AVI 300 - Flight Instructor Ground School (3.00)
AVI 350 - Flight Instructor Flight Lab (3.00) or
AVI 405 - Multi-Engine Rating (3.00)
AVI 941 - Practicum (3.00) or
AVI 301 - Instrument Instructor (1.00)
BUSINESS ADMINISTRATION AND MANAGEMENT
(AAS -- 69 credits)

Term 1 (17.00 credits)
ACC 131 - Principles of Accounting I (4.00)
BUS 102 - Introduction to Business (3.00)
BUS 175 - Business Seminar I (1.00)
CSC 110 - Introduction to Computers (3.00)
ENG 105 - English Composition I (3.00)
Social Science (3.00)

Term 2 (16.00 credits)
ACC 132 - Principles of Accounting II (4.00)
MGT 101 - Principles of Management (3.00)
SPC 101 - Fundamentals of Oral Communication (3.00)
MAT 110 - Math for Liberal Arts (3.00)
Business Elective (3.00)

Term 3 (3.00 credits)
BUS 932 - Internship (3.00) or
Business Elective (3.00) or
ENG 106 - English Composition II (3.00)

Term 4 (15.00 credits)
BUS 183 - Business Law (3.00)
ECN 120 - Macroeconomics (3.00)
Business Electives (6.00)
Humanities (3.00)

Term 5 (18.00 credits)
ECN 130 - Microeconomics (3.00)
BUS 115 - Business Correspondence (2.00) or
BUS 121 - Business Communications (3.00)
BCA 218 - Adv Microsoft Office Applications (3.00)
MKT 110 - Principles of Marketing (3.00)
Business Elective (3.00)
Science (4.00)

COMPUTER PROGRAMMING
(AAS -- 68 credits)

Term 1 (15.00 credits)
CIS 125 - Intro to Programming Logic w/Lang (3.00)
CIS 332 - Database Information Systems (3.00)
GRA 234 - Dreamweaver Level I (3.00)
NET 122 - Computer Hardware Basics (3.00)
SPC 101 - Fundamentals of Oral Communication (3.00)

Term 2 (16.00 credits)
CIS 141 - Computer Science (3.00)
CIS 204 - Web Programming I (3.00)
NET 140 - Networking Essentials (4.00)
ENG 105 - English Composition I (3.00)
MAT 140 - Finite Math (3.00)

Term 3 (17.00 credits)
CIS 161 - C++ Programming (3.00)
CSC 110 - Intro to Computers (3.00)
MAT 157 - Statistics (4.00)
Science (4.00)
Social Science (3.00)

Term 4 (15.00 credits)
CIS 612 - Advanced Visual Basic (3.00)
CIS 171 - Java Programming (3.00)
ART 127 - Digital Illustration or
GRA 118 - Electronic Publishing or
GRA 121 - Digital Drawing (Illustrator) (3.00)
Humanities (3.00)
Social Science (3.00)

Term 5 (5.00 credits)
CIS 941 - Computer Science Practicum (5.00)

CONSTRUCTION TECHNOLOGY
(AAS -- 72 credits)

Term 1 (18.00 credits)
CON 113 - Construction Printreading (2.00)
CON 195 - Foundations and Concrete (5.00)
CON 201 - Framing Techniques Lab I (2.00)
CON 218 - Framing Techniques Lab II (4.00)
CON 300 - Optimum Value Engr-Adv. Framing (1.00)
CON 217 - Exterior Finishing (3.00)
HSC 134 - First Aid/CPR (1.00)

Term 2 (18.00 credits)
CON 106 - Construction Welding (1.00) or
CON 120 - Construction Estimating (1.00)
CON 238 - Techniques of Exterior Covering (4.00)
COM 725 - Communications Skills (2.00) or
ENG 105 - English Composition I (3.00)
CON 228 - Methods of Interior Finishing & Lab (3.00)
CON 229 - Installation of Interior Finishing (3.00)
BUS 161 - Human Relations (3.00)
MAT 770 - Applied Math (2.00)

Term 3 (6.00 credits)
CON 431 - Construction Internship I (6.00)

Term 4 (15.00 credits)
SPC 101 - Fund of Oral Communication (3.00)
CON 932 - Construction Internship II (3.00)
Business or Construction electives: (9.00)

Term 5 (15.00 credits)
CON 351 - Computer Gen Blueprint and Design (3.00)
ACC 111 - Introduction to Accounting (3.00)
CSC 110 - Introduction to Computers (3.00)
Business or Construction electives: (6.00)

CRIMINAL JUSTICE
(AAS -- 68 credits)

Term 1 (18.00 credits)
CRJ 201 - Juvenile Delinquency (3.00)
CRJ 100 - Introduction to Criminal Justice (3.00)
CRJ 200 - Criminology (3.00)
ENG 105 - English Composition I (3.00)
PEH 225 - Healthy Lifestyles Management (3.00)
CJ Concentration courses: choose (3.00)
CRJ 110 - Patrol Procedures (3.00)
CRJ 120 - Introduction to Corrections (3.00)
CRJ 136 - Correctional Law (3.00)
CRJ 141 - Criminal Investigation (3.00)
CRJ 170 - Overview of Cybercrime (3.00)
CRJ 190 - Introduction to Private Security (3.00)
CRJ 110 - Patrol Procedures (3.00)
CRJ 120 - Introduction to Corrections (3.00)
CRJ 220 - Community-Based Corrections (3.00)
Term 1 (18.00 credits)
ENG 105 - English Composition I (3.00)
GRA 140 - Digital Imaging (Photoshop) (3.00)
JOU 173 - Digital Photography (3.00)
JOU 175 - Digital Photography I (3.00)
PEA Elective (1.00)
CRJ Concentration course: (3.00)
MMS 129 - Digital Audio & Video Prod & Editing (3.00)
MMS 122 - Career Seminar (1.00)
MAT 110 - Math for Liberal Arts (3.00)
SPC 101 - Fundamentals of Oral Communication (3.00)

Term 2 (17.00 credits)
GRA 141 - Digital Imaging II (3.00) or
MMS 225 - Advanced Television Production (3.00)
MMS 101 - Mass Media (3.00)
MMS 136 - Writing for Digital Media (3.00)
MMS 402 - Multimedia Projects II (2.00)
MAT 110 - Math for Liberal Arts (3.00)
SPC 101 - Fundamentals of Oral Communication (3.00)

Term 3 (17.00 credits)
ART 121 - 2-D Design (4.00)
GRA 234 - Dreamweaver Level I (3.00)
MKT 140 - Principles of Selling (3.00)
MMS 403 - Multimedia Projects III (2.00)
SMM 110 - Writing For The Web (2.00)
SMM 100 - Introduction to Social Media (3.00)

Term 4 (17.00 credits)
BUS 161 - Human Relations (3.00)
GRA 235 - Dreamweaver Level II (3.00) or
MMS 234 - Radio Workshop (4.00) or
MMS 225 - Advanced Television Production (3.00)
MKT 110 - Principles of Marketing (3.00)
MMS 185 - Digital Media Law and Ethics (3.00)
MMS 404 - Multimedia Projects IV (2.00)
SMM 210 - Web Analytics (3.00)

ELECTRICAL TECHNOLOGY
(AAS -- 82 credits)

Term 1 (19.00 credits)
ELE 155 - National Electric Code I (2.00)
ELE 119 - Basic Electricity I (4.00)
ELE 181 - Residential Electric/Electronic Systems (4.00)
SER 101 - Energy, Sustainability, and the Env (3.00)
SER 114 - Blueprint Reading (1.00)
SER 116 - Career Seminar (1.00)
SER 124 - Industrial Safety and Workplace Env (1.00)
MAT 743 - Technical Math (3.00)

Term 2 (20.00 credits)
ELE 156 - National Electrical Code II (2.00)
ELE 136 - Basic Electricity II (4.00)
ELE 354 - Commercial Electric/Electronic Systems (3.00)
ELE 226 - Electric Motors and Generators (4.00)
COM 753 - Technical Communication (3.00)
PHY 709 - Introduction to Technical Physics (4.00)
<table>
<thead>
<tr>
<th>Term 3 (6.00 credits)</th>
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<th>ENVIRONMENTAL STUDIES (AAS -- 68 credits)</th>
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<tbody>
<tr>
<td>ELE 946 - Electrical Technology Internship I (6.00)</td>
<td>ELE 114 - Environmental Studies I (4.00)</td>
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<tr>
<td>Term 4 (19.00 credits)</td>
<td>ELE 158 - National Electrical Code III (2.00)</td>
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<td>ELE 183 - Electrical Practical Applications (4.00)</td>
<td>SER 116 Career Seminar (1.00)</td>
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<tr>
<td>ELT 309 - Digital Circuits (3.00)</td>
<td>CSC 110 - Introduction to Computers (3.00)</td>
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<td>WTT 216 - Power Gen and Transmission (3.00)</td>
<td>Math (3.00)</td>
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<td>NET 148 - Basic Networking &amp; Computer Tech (3.00)</td>
<td>Science (4.00)</td>
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<td>HCR 415 - Controls for HVACR (3.00)</td>
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<td>SER 117 - Estimating for the Trades (1.00)</td>
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<td>Term 5 (18.00 credits)</td>
<td>Term 2 (15.00 credits)</td>
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<tr>
<td>ELE 255 - National Electrical Code IV (2.00)</td>
<td>EVS 204 - Environmental Studies Seminar II (1.00)</td>
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<td>ELE 242 - Programmable Logic Control Systems (4.00)</td>
<td>EVS 124 - Environmental Studies II (4.00)</td>
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<tr>
<td>ELE 357 - Industrial Electrical/Electronic Systems (3.00)</td>
<td>ENG 105 - English Composition I (3.00)</td>
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<td>SER 107 - Sustainable Energy Technologies (3.00)</td>
<td>Humanities (3.00)</td>
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<td>MGT 101 - Principles of Management (3.00)</td>
<td>Science (4.00)</td>
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<td>BUS 161 - Human Relations (3.00)</td>
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<tr>
<td><strong>ENGINEERING TECHNOLOGY</strong> (AAS -- 77 credits)</td>
<td>Term 3 (4.00 credits)</td>
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<td><strong>Term 1 (16.00 credits)</strong></td>
<td>EVS 941 - Environmental Studies Practicum (4.00)</td>
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<tr>
<td>CIS 125 - Intro to Programming Logic w/Lang (3.00)</td>
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<td>EGT 114 - Introduction to Engineering Tech (3.00)</td>
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<td>ELE 119 - Basic Electricity I (4.00)</td>
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<td>SER 114 - Blueprint Reading (1.00)</td>
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<td>SER 116 - Career Seminar (1.00)</td>
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<td>SER 124 - Industrial Safety and Workplace Env (1.00)</td>
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<td>MAT 743 - Technical Math (3.00)</td>
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<td>ELE 242 - Programmable Logic Control Systems (4.00)</td>
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<td>ELE 136 - Basic Electricity II (4.00)</td>
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<td>ELE 226 - Electric Motors and Generators (4.00)</td>
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<td>ELT 309 - Digital Circuits (3.00)</td>
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<td>PHY 709 - Introduction to Technical Physics (4.00)</td>
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<td><strong>Term 3 (7.00 credits)</strong></td>
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<tr>
<td>EGT 946 - Engineering Technology Internship I (6.00) or</td>
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<td>EGT 934 - Engineering Tech Internship II (4.00) and</td>
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<td>EGT 950 - Engineering Tech Seminar (2.00) or</td>
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<td>Humanities (3.00)</td>
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<td><strong>Term 4 (16.00 credits)</strong></td>
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<tr>
<td>ATR 105 - Industrial Robotics (3.00)</td>
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<td>EGT 117 - Fluid Power Fundamentals (2.00)</td>
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<td>ELT 125 - Advanced PLC (3.00)</td>
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<td>ELE 183 - Electrical Practical Applications (4.00)</td>
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<td>MFG 505 - Lean Manufacturing (1.00)</td>
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<tr>
<td>NET 148 - Basic Networking and Computer Tech (3.00)</td>
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<td><strong>Term 5 (19.00 credits)</strong></td>
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<tr>
<td>ATR 106 - Motion Control (3.00)</td>
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<td>ATR 253 - Robotic Programming (3.00)</td>
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<td>BUS 161 - Human Relations (3.00)</td>
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<td>BUS 121 - Business Communications (3.00)</td>
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<tr>
<td>EGT 137 - Fluid Power Control (4.00)</td>
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<tr>
<td>CIS 141 - Computer Science (3.00)</td>
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**FARM EQUIPMENT AND DIESEL TECHNOLOGY** (AAS -- 78 credits)

| Term 1 (18.00 credits) | |
| AGM 411 - Engine Repair (6.00) | |
| AGM 425 - Farm Equipment Air Conditioning (4.00) | |
| AGM 413 - Diesel Engine Overhaul (5.00) | |
| BCA 212 - Intro to Computer Business Aps (3.00) | |
| **Term 2 (18.00 credits)** | |
| AGM 850 - Dealership Experience (2.00) | |
| AGM 430 - Differentials and Final Drives (6.00) | |
| AGM 431 - Transmissions (7.00) | |
| BUS 161 - Human Relations (3.00) | |
| **Term 3 (11.00 credits)** | |
| AGM 416 - Combine and Implement Repair and Adjustment (4.0) | |
| AGM 420 - Fuel Systems (2.00) | |
| AGM 421 - Fuel Systems Lab (3.00) | |
| WEL 334 - Trade and Industry Welding (2.00) | |
| **Term 4 (16.00 credits)** | |
| AGM 114 - Hydraulics I (2.00) | |
| AGM 115 - Hydraulic Components Lab (3.00) | |
| AGM 116 - Fundamentals of Hydraulic (3.00) | |
| AGM 117 - Fundamentals of Hydraulic Lab (2.00) | |
| COM 723 - Workplace Communications (3.00) | |
| MAT 772 - Applied Math (3.00) | |
Term 5 (15.00 credits)
AGM 303 - Electrical Components Lab (3.00)
AGM 850 - Dealership Experience (2.00)
AGM 300 - Fundamentals of Electricity (3.00)
AGM 301 - Fundamentals of Electricity Lab (2.00)
AGM 302 - Electrical Components (2.00)
BUS 126 - Business Principles (3.00)

GAME DESIGN AND DEVELOPMENT
(AAS -- 77 credits)

Term 1 (18.00 credits)
CIS 125 - Intro to Programming w/Language (3.00)
CIS 332 - Database Information Systems (3.00)
GRA 234 - Dreamweaver Level I (3.00)
NET 122 - Computer Hardware Basics (3.00)
ENG 105 - English Composition I (3.00)
MAT 120 - College Algebra (3.00)

Term 2 (18.00 credits)
CIS 141 - Computer Science (3.00)
CIS 204 - Intro to Website Development (3.00)
NET 142 - Network Essentials (3.00)
ENG 106 - English Composition II (3.00)
MAT 140 - Finite Math (3.00) or
MAT 130 - Trigonometry (3.00)
Social Science (3.00)

Term 3 (4.00 credits)
CIS 941 - Computer Science Practicum (4.00)

Term 4 (18.00 credits)
CIS 146 - Intro to Video Game Development (3.00)
CIS 147 - 3D Level Design for Games (3.00)
CIS 166 - C++/C# for Game Developers (3.00)
CIS 366 - Game Development I (3.00)
Humanities (3.00)
SPC 101 - Fundamentals of Oral Communication (3.00)

Term 5 (19.00 credits)
CIS 148 - 3-D Modeling and Character Animation (3.00)
CIS 367 - Game Development II (3.00)
GRA 166 - Web Animations (3.00)
MMS 101 - Mass Media (3.00)
Humanities (3.00)
Science (4.00)

GRAPHIC DESIGN
(AAS -- 69 credits)

Term 1 (17.00 credits)
ART 121 - 2-D Design (4.00)
GRA 118 - Electronic Publishing (3.00)
GRA 140 - Digital Imaging (Photoshop) (3.00)
GRA 801 - Graphic Design Seminar (1.00)
SPC 101 - Fundamentals of Oral Communication (3.00)
Social Science (3.00)

Term 2 (15.00 credits)
ART 101 - Art Appreciation (3.00)
ART 133 - Drawing (3.00)
GRA 121 - Digital Drawing (Illustrator) (3.00)
GRA 141 - Digital Imaging II (3.00)
ENG 105 - English Composition I (3.00)

Term 3 (2.00 credits)
GRA 932 - Internship (2.00)

Term 4 (17.00 credits)
GRA 175 - Graphic Design Principles (3.00)
GRA 228 - Flash (3.00)
GRA 802 - Graphic Design Seminar II (1.00)
Instructor approved JOU, ART, GRA electives:
Suggest JOU-171 (6.00)
Science (4.00)

Term 5 (18.00 credits)
ART 127 - Digital Illustration (3.00)
GRA 188 - Advertising Layout and Composition (3.00)
GRA 162 - Web Page Graphics (3.00)
JOU 173 - Digital Photography (3.00)
MAT 110 - Math for Liberal Arts (3.00)
Social Science (3.00)

HEATING, VENTILATION, AND AIR
CONDITIONING TECHNOLOGY
(AAS -- 78 credits)

Term 1 (16.00 credits)
ELE 119 - Basic Electricity I (4.00)
HCR 102 - Introduction to HVAC (3.00)
SER 101 - Energy, Sustainability & the Environment (3.00)
SER 114 - Blueprint Reading (1.00)
SER 16 - Career Seminar (1.00)
SER 124 - Industrial Safety & Workplc Environment (1.00)
MAT 743 - Technical Math (3.00)

Term 2 (18.00 credits)
ELE 136 - Basic Electricity II (4.00)
ELE 226 - Electric Motors and Generators (4.00)
COM 753 - Technical Communications (3.00)
MGT 101 - Principles of Management (3.00)
PHY 709 - Introduction to Technical Physics (4.00)

Term 3 (6.00 credits)
HCR 946 - HVAC Internship I (6.00)

Term 4 (17.00 credits)
HCR 112 - Heating Fundamentals (3.00)
HCR 415 - Controls for HVACR (3.00)
HCR 444 - HVACR Systems I (4.00)
HCR 205 - Air Conditioning Principles (3.00)
HCR 305 - Fundamentals of Refrigeration (3.00)
SER 117 - Estimating for the Trades (1.00)

Term 5 (21.00 credits)
HCR 125 - Oil and Hydronic Heating (3.00)
HCR 291 - Commercial Systems (3.00)
HCR 155 - Troubleshooting Heating Systems (3.00)
HCR 240 - Troubleshooting Air Conditioning Sys (3.00)
HCR 505 - Air Distribution (3.00)
HCR 810 - Energy Management (3.00)
BUS 161 - Energy Management (3.00)
HOTEL AND RESTAURANT MANAGEMENT
(AAS -- 77 credits)

**Term 1 (21.00 credits)**
- HCM 104 - Applied Food Service Sanitation (4.00)
- HCM 292 - Food Preparation (3.00)
- HCM 591 - Housekeeping Management (3.00)
- HCM 705 - Hospitality Club Activities I (1.00)
- SPC 101 - Fund of Oral Communication (3.00)
- CSC 110 - Introduction to Computers (3.00)
- HCM 705 - Hospitality Club Activities I (1.00)
- HSC 134 - First Aide/CPR (1.00)

**Term 2 (20.00 credits)**
- BUS 121 - Business Communications (3.00) or
- ENG 105 - English Composition I (3.00)
- HCM 141 - Food Production (5.00)
- HCM 595 - Managing Front Office Oper/Night Audit (4.00)
- HCM 707 - Hospitality Club Activities II (1.00)
- BUS 161 - Human Relations (3.00)
- HCM 229 - Nutrition for the Life Cycle (4.00)

**Term 4 (18.00 credits)**
- ACC 111 - Introduction to Accounting (3.00)
- HCM 237 - Modified Diets (4.00)
- HCM 240 - Menu Planning and Design (2.00)
- HCM 245 - Design & Layout of Food Service Facil (3.00)
- HCM 330 - Hospitality Personnel Management (3.00)
- HCM 709 - H & R Club Activities III (1.00)
- HCM 450 - Job Seeking Skills I (2.00)
- HCM 939 - Work Experience 1 (3.00)

**Term 5 (18.00 credits)**
- HCM 310 - Hospitality Law (3.00)
- HCM 592 - Convention Management (3.00)
- HCM 602 - Intro to Food & Bar Operations (3.00)
- HCM 711 - H & R Club Activities IV (1.00)
- HCM 940 - Work Experience II (3.00)

**HUMAN SERVICES/DISABILITY STUDIES**
(AAS -- 69 credits)

**Term 1 (14.00 credits)**
- DSV 125 - Behavior Management (3.00)
- HCM 592 - Convention Management (3.00)
- HCM 602 - Intro to Food & Bar Operations (3.00)
- HCM 711 - H & R Club Activities IV (1.00)
- HCM 239 - Customer Service (2.00)
- HCM 940 - Work Experience II (3.00)

**Term 2 (16.00 credits)**
- HCM 104 - Applied Food Service Sanitation (4.00)
- HCM 292 - Food Preparation (3.00)
- HCM 591 - Housekeeping Management (3.00)
- HCM 705 - Hospitality Club Activities I (1.00)
- SPC 101 - Fund of Oral Communication (3.00)
- CSC 110 - Introduction to Computers (3.00)
- HCM 705 - Hospitality Club Activities I (1.00)
- HSC 134 - First Aide/CPR (1.00)

**Term 3 (6.00 credits)**
- DSV 932 - Internship Human Services & Disability Studies (6.00)
- DSV 941 - Practicum in Human Services and Disability Studies (3.00)
- HSC 114 - Medical Terminology (3.00)

**Term 4 (17.00 credits)**
- BUS 121 - Business Communications (3.00) or
- ENG 105 - English Composition I (3.00)
- HCM 141 - Food Production (5.00)
- HCM 595 - Managing Front Office Oper/Night Audit (4.00)
- HCM 707 - Hospitality Club Activities II (1.00)
- BUS 161 - Human Relations (3.00)
- HCM 229 - Nutrition for the Life Cycle (4.00)

**Term 5 (16.00 credits)**
- HSV 140 - Social Work and Social Welfare (3.00)
- PSY 121 - Developmental Psychology (3.00)
- SOC 120 - Marriage and Family (3.00)
- SOC 200 - Minority Group Relations (3.00)
- Humanities (4.00)

**MARINE SERVICE TECHNOLOGY**
(AAS -- 78 credits)

**Term 1 (19.00 credits)**
- MSE 164 - Marine Engine 2 & 4-Stroke Theory (2.00)
- MSE 165 - Marine Engine 2 & 4-Stroke Theory L (2.00)
- MSE 153 - Fund of Electricity Theory and Lab (3.00)
- MSE 154 - Intro to Power Generators (1.00)
- MSE 147 - Introduction to Marine Service (2.00)
- MSE 149 - Introduction to Marine Rigging (2.00)
- MSE 151 - Shop Safety and Procedures (1.00)
- MSE 173 - Marine Fuel Sys Theory and Lab (3.00)
- BUS 161 - Human Relations (3.00)

**Term 2 (17.00 credits)**
- COM 723 - Workplace Communications (3.00)
- MSE 159 - Snowmobile Systems (3.00)
- MSE 190 - Marine Electrical Sys Theory/ Lab (4.00)
- MSE 148 - Introduction to Marine Detailing (1.00)
- MSE 183 - Personal Water Craft Systems (3.00)
- MSE 169 - Marine Drive Systems Theory and Lab (3.00)

**Term 3 (9.00 credits)**
- MSE 932 - Internship (6.00)
- MAT 772 - Applied Math (3.00)

**Option I: Advanced Business Management**

**Term 4 (18.00 credits)**
- ACC 111 - Introduction to Accounting (3.00)
- MSE 252 - Marine Advanced Drivability (3.00)
- MSE 150 - Shop Management (3.00)
- Instructor approved electives (9.00)

**Option II: Advanced Marine Service Technology**

**Term 4 (18.00 credits)**
- MSE 252 - Marine Advanced Drivability (3.00)
- MSE 150 - Shop Management (3.00)
- MSE 286 - Marine Advanced Electrical (3.00)
- MSE 273 - Marine Advanced Fuel Systems (3.00)
- Instructor approved electives (6.00)

**Term 5 (15.00)**
Concentration Electives— (15.00)
**PARALEGAL/LEGAL STUDIES**  
(AAS -- 70 credits)

**Term 1 (16.00 credits)**  
LGL 122 - Legal Ethics (2.00)  
LGL 120 - Introduction to Law and Paralegal (2.00)  
LGL 250 - Family Law (3.00)  
LGL 230 - Criminal Law and Procedure (3.00)  
CSC 110 - Introduction to Computers (3.00)  
ENG 105 - English Composition I (3.00)

**Term 2 (17.00 credits)**  
LGL 154 - Legal Research (4.00)  
LGL 121 - Law Office Software (1.00)  
LGL 180 - Torts and Litigation (3.00)  
LGL 210 - Contract Law (3.00)  
ENG 106 - English Composition II (3.00)  
SPC 101 - Fundamentals of Oral Communication (3.00)

**Term 3 (19.00 credits)**  
BUS 183 - Business Law (3.00) or  
ACC 261 - Income Tax Accounting (3.00)  
LGL 140 - Wills, Trusts and Estate Administration (3.00)  
LGL 161 - Legal Writing (4.00)  
MAT 110 - Math for Liberal Arts (3.00)  
Humanities (3.00)  
Social Science (3.00)

**Term 4 (16.00 credits)**  
BUS 250 - Principles of Real Estate (3.00)  
LGL 242 - Civil Procedure and Practice (3.00)  
LGL 200 - American Trial Process (3.00) or  
LGL 205 - Employment Law (3.00) or  
ACC 131 - Principles of Accounting I (4.00) or  
ACC 261 - Income Tax Accounting (3.00)  
Science (4.00)  
Social Science (3.00)

**Term 5 (2.00 credits)**  
LGL 942 - Paralegal Practicum (2.00)

**POWERSPORTS AND POWER EQUIPMENT TECHNOLOGY**  
(AAS Option 1 - 80 credits)  
(AAS Option 2 - 77 credits)

**Term 1 (19.00 credits)**  
MSE 143 - Small Engines Theory (3.00)  
MSE 146 - Small Engines Laboratory (3.00)  
MOT 151 - Shop Safety and Procedures (1.00)  
MOT 153 - Fundamentals of Electricity (3.00)  
MSE 155 - Drive System Fund Theory/Lab (3.00)  
BUS 161 - Human Relations (3.00)  
HSC 134 - First Aid/CPR (1.00)  
WEL 334 - Trade and Industry Welding (2.00)

**Term 2 (18.00 credits)**  
COM 723 - Workplace Communications (3.00)  
MOT 131 - Motorcycle Engine 2 & 4 Stroke Theory (3.00)  
MOT 129 - Motorcycle Engine 2 & 4 Stroke Lab (2.00)  
MOT 139 - Motorcycle Fuel Sys Theory/Lab (3.00)  
MOT 144 - Motorcycle Drive Systems, Chassis & Suspension Theory & Lab (4.00)  
MAT 772 - Applied Math (3.00)

**Term 3 (7.00 credits)**  
MOT 146 - Motorcycle Ignition and Electrical Systems Theory and Lab (3.00)  
MOT 910 - Cooperative Work Experience (4.00)

**Option 1: Advanced Powersports and Small Engine**

**Term 4 (19.00 credits)**  
MOT 202 - ATV Systems (3.00)  
MOT 203 - Motorcycle & ATV Tune Up and Maintenance (4.00)  
MOT 211 - Advanced Drivability & Troubleshooting (4.00)  
MOT 240 - Dyno Analysis (2.00)  
BUS 126 - Business Principles (3.00)  
BCA 212 - Computer Business Applications or CSC-110 (3.00)

**Term 5 (17.00 credits)**  
MOT 221 - Adv Electrical Diagnosis & Troubleshoot (4.00)  
MOT 231 - Advanced Fuel Systems (4.00)  
MOT 250 - Outdoor Power Equipment (3.00)  
MSE 159 - Snowmobile Systems (3.00)  
MSE 183 - Personal Water Craft Systems (3.00)

**Option 2: Advanced Business**

**Term 4 (15.00)**

**SALES AND MARKETING MANAGEMENT**  
(AAS -- 69 credits)

**Term 1 (17.00 credits)**  
BUS 161 - Human Relations (3.00)  
BUS 175 - Business Seminar I (1.00)  
MKT 140 - Principles of Selling (3.00)  
MKT 142 - Consumer Behavior (3.00)  
MKT 155 - Visual Merchandising (4.00)  
MKT 290 - Professionalism I: DEX/DECA (1.00)  
MKT 938 - On-The-Job Training (2.00)

**Term 2 (16.00 credits)**  
ACC 111 - Introduction to Accounting (3.00)  
MGT 101 - Principles of Management (3.00)  
Business Electives (15.00)

**Term 3 (5.00 credits)**  
BUS 932 - Internship (5.00)

**Term 4 (15.00 credits)**  
CSC 110 - Introduction to Computers (3.00)  
SPC 101 - Fundamentals of Oral Communication (3.00)  
MAT 110 - Math for Liberal Arts (3.00)  
Business Electives: (6.00)
SUBSTANCE ABUSE COUNSELING
(AAS -- 68 credits)

Term 1 (15.00 credits)
HSV 284 - Case Management (3.00) or
DSV 135 - Assessment and Instruction DSV (3.00)
ENG 105 - English Composition I (3.00)
MAT 110 - Math for Liberal Arts (3.00)
PSY 111 - Introduction to Psychology (3.00)
SPC 101 - Fundamentals of Oral Communication (3.00)

Term 2 (16.00 credits)
CRJ 207 - Drug Use and Abuse (3.00)
DSV 160 - Counseling Skills (4.00) or
HSV 225 - Counseling Techniques (3.00)
MAT 140 - Finite Math (3.00)
PHI 105 - Introduction to Ethics (3.00)
PSY 121 - Developmental Psychology (3.00)

Term 3 (14.00 credits)
CSC 110 - Introduction to Computers (3.00)
SOC 200 - Minority Group Relations (3.00)
Humanities (4.00)
Science (4.00)

Term 4 (16.00 credits)
HSV 293 - Sub Abuse Treatment & Planning (3.00)
PSY 241 - Abnormal Psychology (3.00)
SOC 120 - Marriage and Family (3.00) or
SOC 115 - Social Problems (3.00) or
SOC 186 - Contemporary Global Issues (3.00)
Humanities (3.00)
Science (4.00)

Term 5 (7.00 credits)
HSV 901 - Substance Abuse Practicum I (3.00)
HSV 902 - Substance Abuse Practicum II (4.00)

SURGICAL TECHNOLOGY
(AAS -- 76 credits)
The Surgical Technology Diploma and AAS Degree Programs, Spencer Campus, are accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Accreditation Review Committee on Education Surgical Technology and Surgical Assisting. (ARCSTSA)

Commission on Accreditation of Allied Health Education Programs (CAAHEP)
1361 Park Street
Clearwater, FL 33756
Phone: 727-210-2350

Accreditation Review Committee on Education in Surgical Technology & Surgical Assisting (ARCSTSA)
6 W. Dry Creek Circle, Suite #110
Littleton, CO 80120
Phone: 303-694-9262

Term 1 (16.00 credits)
BIO 168 - Human Anatomy & Physiology I (4.00)
CSC 110 - Introduction to Computers (3.00)
ENG 105 - English Composition I (3.00)
HSC 114 - Medical Terminology (3.00)
Humanities (3.00)

Term 2 (16.00 credits)
BIO 173 - Human Anatomy & Physiology II (4.00)
MAT 110 - Math for Liberal Arts (3.00)
PSY 111 - Introduction to Psychology (3.00)
SOC 110 - Introduction to Sociology (3.00)
Elective: PSY 121 - Developmental Psychology (3.00)

Term 3 (6.00 credits)
BUS 161 - Human Relations (3.00)
SPC 101 - Fundamentals of Oral Communication (3.00)

Term 4 (17.00 credits)
SUR 430 - Microbiology For Surgical Technology (2.00)
SUR 129 - Surgical Foundations (6.00)
SUR 123 - Patient Care Concepts (2.00)
SUR 131 - Surgical Foundations Lab (4.00)
Elective: PHI 105 - Introduction to Ethics (3.00)

Term 5 (14.00 credits)
ADM 220 - Career Development Skills (1.00)
SUR 223 - Surgical Procedures Lecture-Course (6.00)
SUR 227 - Surgical Procedures Lab (2.00)
SUR 420 - Pharmacology for the Surgical Tech (2.00)
SUR 517 - Surgical Technology Practicum I (3.00)

Term 6 (7.00 credits)
SUR 519 - Surgical Technology Practicum (4.00)
Instructor approved elective: (3.00)
### VETERINARY TECHNICIAN  
(AAS -- 77 credits)

**Term 1 (18.00 credits)**  
- AGV 119 - Vet Medical Terminology (2.00)  
- AGV 118 - Vet Tech Anatomy and Physiology I (4.00)  
- AGV 103 - Introduction to Veterinary Science (3.00)  
- AGV 150 - Office Procedures for Veterinary Tech (3.00)  
- AGV 189 - Small Animal Clinic Observation (2.00)  
- AGV 267 - Dosage Calculations for Vet Tech (1.00)  
- SPC 101 - Fundamentals of Oral Communication (3.00)

**Term 2 (18.00 credits)**  
- AGV 112 - Vet Tech Anatomy & Physiology II (4.00)  
- AGV 145 - Animal Nutrition (3.00)  
- AGV 167 - Veterinary Clinic Pathology I (3.00)  
- AGV 161 - Animal Nursing I (3.00)  
- AGV 183 - Large Animal Clinic Observation (2.00)  
- MAT 110 - Math for Liberal Arts (3.00)

**Term 3 (7.00 credits)**  
- BUS 161 - Human Relations (3.00)  
- AGV 932 - Internship (4.00)

**Term 4 (16.00 credits)**  
- AGV 140 - Veterinary Pharmacology (3.00)  
- AGC 210 - Employment Seminar (1.00)  
- AGV 177 - Animal Nursing III (4.00)  
- AGV 188 - Veterinary Clinic Pathology III (4.00)  
- AGV 187 - Veterinary Computer Applications (3.00)  
- Social Science (3.00)

### WATER QUALITY AND SUSTAINABLE AQUATIC RESOURCES  
(AAS -- 76 credits)

**Term 1 (17.00 credits)**  
- ELE 119 - Basic Electricity I (4.00)  
- EVS 112 - Biological Science for Water Quality (4.00)  
- MAT 743 - Technical Math (3.00)  
- SER 101 - Energy, Sustainability & the Environment (3.00)  
- SER 114 - Blueprint Reading (1.00)  
- SER 116 - Career Seminar (1.00)  
- SER 124 - Indus Safety and Workplc Environment (1.00)

**Term 2 (18.00 credits)**  
- BUS 121 - Business Communications (3.00)  
- ELE 136 - Basic Electricity II (4.00)  
- ELE 226 - Electric Motors and Generators (4.00)  
- EVS 113 - Physical Science for Water Quality (4.00)  
- EVS 173 - Introduction to Water Resources (3.00)

**Term 3 (6.00 credits)**  
- EVS 946 - Water Quality Internship (6.00)

**Term 4 (18.00 credits)**  
- CSC 110 - Introduction to Computers (3.00)  
- ELE 182 - Basic Electronics (4.00)  
- EVS 214 - Water Quality Analysis (4.00)  
- EVS 224 - Water Distribution & Wastewater Collection Sys (4.00)  
- SER 230 - Maint and Repair of Pumps & Valves (3.00)

**Term 5 (17.00 credits)**  
- BUS 161 - Human Relations (3.00)  
- EVS 205 - Water Quality Seminar (1.00)  
- EVS 274 - Water Processing (5.00)  
- EVS 284 - Wastewater Treatment (5.00)  
- MGT 101 - Principles of Management (3.00)

### WEB DEVELOPMENT AND DESIGN  
(AAS -- 69 credits)

**Term 1 (15.00 credits)**  
- CIS 125 - Intro to Programming Logic w/Lang (3.00)  
- CIS 332 - Database Information Systems (3.00)  
- GRA 234 - Dreamweaver Level I (3.00)  
- NET 122 - Computer Hardware Basics (3.00)  
- SPC 101 - Fundamentals of Oral Communication (3.00)

**Term 2 (16.00 credits)**  
- CIS 204 - Intro to Website Development (3.00)  
- GRA 110 - Introduction to Computers (3.00) or  
- MKT 110 - Principles of Marketing (3.00)  
- ENG 105 - English Composition I (3.00)  
- NET 140 - Networking Essentials (4.00)  
- Humanities (3.00)

**Term 3 (4.00 credits)**  
- GRA 932 - Internship (4.00)

**Term 4 (18.00 credits)**  
- GRA 140 - Digital Imaging (Photoshop) (3.00)  
- GRA 162 - Web Page Graphics (3.00)  
- GRA 228 - Flash (3.00)  
- JOU 173 - Digital Photography (3.00)  
- MAT 140 - Finite Math (3.00) or  
- MAT 157 - Statistics (4.00)  
- Social Science (3.00)

**Term 5 (16.00 credits)**  
- GRA 121 - Digital Drawing (Illustrator) (3.00)  
- GRA 166 - Web Animations (3.00)  
- GRA 235 - Dreamweaver Level II (3.00)  
- SOC 110 - Introduction to Sociology (3.00) or  
- PSY 111 - Introduction to Psychology (3.00)  
- Science (4.00)
WIND ENERGY AND TURBINE TECHNOLOGY
(AAS -- 80 credits)

Term 1 (19.00 credits)
ELE 119 - Basic Electricity I (4.00)
SER 114 - Blueprint Reading (1.00)
SER 116 - Career Seminar (1.00)
SER 124 - Industrial Safety and Workplace Env (1.00)
WT 115 - Field Training and Project Operations (4.00)
WT 104 - Introduction to Wind Energy (4.00)
MAT 743 - Technical Math (3.00)
SDV 103 - Successful Learning (1.00)

Term 2 (21.00 credits)
COM 753 - Technical Communications (3.00)
EGT 146 - Hydraulics (3.00)
ELE 136 - Basic Electricity II (4.00)
ELE 226 - Electric Motors and Generators (4.00)
PHY 709 - Introduction to Technical Physics (4.00)
WT 133 - Wind Turbine Mechanical Systems (3.00)

Term 3 (6.00 credits)
WT 946 - Wind Energy & Turbine Technology Internship II (6.00)

Term 4 (16.00 credits)
ELE 155 - NEC I (2.00)
ELE 183 - Electrical Practical Applications (4.00)
ELT 309 - Digital Circuits and Systems (3.00)
MFG 505 - Lean Manufacturing (1.00)
NET 148 - Basic Networking and Comp Tech (3.00)
WT 216 - Power Generation and Trans (3.00)

Term 5 (18.00 credits)
ELE 242 - Programmable Logic Control Sys (4.00)
MGT 101 - Principles of Management (3.00)
WT 204 - Wind Turbine Siting (4.00)
WT 225 - Data Acquisition and Assessment (4.00)
BUS 161 - Human Relations (3.00)
Vocational Programs

Vocational programs are those which include at least the equivalent of two full-time semesters but are less than two academic years in length. A diploma is awarded upon successful completion.

Programs are available in the following areas:
- Accounting
- Auto Collision and Paint Technology
- Business Specialist
- Construction Technology
- Early Childhood Education
- Graphic Specialist
- Hospitality Services
- Marine Service Technology
- Medical Assistant Specialist
- Medical Office Technology
- Office Specialist
- Parts Sales and Inventory Control
- Photography Specialist
- Powersports & Power Equipment Technology
- Practical Nursing
- Sales and Marketing
- Surgical Technology
- Water Quality and Sustainable Aquatic Resources
- Welding
- Wind Energy and Turbine Technology

**ACCOUNTING**
(Diploma -- 35 credits)

**Term 1 (17.00 credits)**
- ACC 131 - Principles of Accounting I (4.00)
- ACC 161 - Payroll Accounting (3.00)
- BUS 175 - Business Seminar I (1.00)
- CSC 110 - Introduction to Computers (3.00)
- ENG 105 - English Composition I (3.00)
- MAT 110 - Math for Liberal Arts (3.00)

**Term 2 (18.00 credits)**
- ACC 132 - Principles of Accounting II (4.00)
- ACC 310 - Computer Accounting (2.00) or ACC 311 - Computer Accounting (3.00)
- ADM 116 - Keyboarding II (3.00)
- ADM 162 - Office Procedures (3.00)
- BCA 185 - Beginning Webpage Development (3.00) or BCA 218 - Adv Microsoft Office Applications (3.00)
- ENG 105 - Composition I (3.00)

**AUTO COLLISION AND PAINT REPAIR TECHNOLOGY**
(Diploma 48 credits)

**Term 1 (20.00 credits)**
- CRR 302 - Introduction to Collision Repair (2.00)
- BUS 160 - Human Relations (2.00)
- CRR 326 - Sheet Metal Repair Theory (3.00)
- CRR 327 - Sheet Metal Repair Lab (2.00)
- CRR 421 - Non-Structural Repair Theory (3.00)
- CRR 422 - Non-Structural Repair Lab (2.00)
- CRR 203 - Plastic Repair Theory (2.00)
- CRR 351 - Collision Lab I (2.00)
- WEL 334 - Trade and Industry Welding (2.00)

**Term 2 (16.00 credits)**
- CRR 742 - Estimating Theory (2.00)
- CRR 749 - Estimating Lab (1.00)
- CRR 808 - Introduction to Refinishing Theory (1.00)
- CRR 809 - Introduction to Refinishing Lab (3.00)
- CRR 838 - Refinishing II Theory (2.00)
- CRR 839 - Refinishing II Lab (3.00)
- COM 725 - Workplace Communications (2.00)
- CRR 908 - Cooperative Education (2.00)

**BUSINESS SPECIALIST**
(Diploma -- 35 credits)

**Term 1 (17.00 credits)**
- ACC 111 - Introduction to Accounting (3.00)
- ADM 116 - Keyboarding II (3.00)
- ADM 132 - Business Math and Calculators (2.00) or BUS 110 - Business Math and Calculators (3.00)
- ADM 254 - Business Professionalism (1.00)
- BUS 160 - Human Relations (2.00)
- CSC 110 - Introduction to Computers (3.00)
- SPC 101 - Fundamentals of Oral Communication (3.00)

**Term 2 (18.00 credits)**
- ACC 161 - Payroll Accounting (3.00)
- ADM 255 - Business Professionalism II (1.00)
- ACC 310 - Computer Accounting (2.00) or ACC 311 - Computer Accounting (3.00)
- ADM 162 - Office Procedures (3.00)
- BCA 134 - Word Processing (3.00)
- BCA 185 - Beginning Webpage Development (3.00) or BCA 218 - Adv Microsoft Office Applications (3.00)
- ENG 105 - Composition I (3.00)

**CONSTRUCTION TECHNOLOGY**
(Diploma -- 42 credits)

**Term 1 (18.00 credits)**
- CON 113 - Construction Printreading (2.00)
- CON 195 - Foundations and Concrete (5.00)
- CON 201 - Framing Techniques and Lab I (2.00)
- CON 218 - Framing Techniques and Lab II (4.00)
- CON 300 - Optimum Value Engr-Adv. Framing (1.00)
- CON 217 - Exterior Finishing (3.00)
- HSC 134 - First Aid/CPR (1.00)

**Term 2 (18.00 credits)**
- CON 106 - Construction Welding (1.00) or CON 120 - Construction Estimating (1.00)
- CON 238 - Techniques of Exterior Covering (4.00)
- COM 725 - Communications Skills (2.00) or ENG 105 - English Composition I (3.00)
- CON 228 - Methods of Interior Finishing and Lab (3.00)
- CON 229 - Installation of Interior Finishing (3.00)
- BUS 161 - Human Relations (3.00)
- MAT 770 - Applied Math (2.00)
EARLY CHILDHOOD EDUCATION  
(Diploma -- 35 credits)

Term 1 (17.00 credits)
ECE 112 - Portfolio Development I (1.00)  
ECE 170 - Child Growth and Development (3.00)  
ECE 103 - Intro to Early Childhood Education (3.00)  
ECE 221 - Infant/Toddler Care and Education (3.00)  
ECE 110 - Early Childhood Professionals I (1.00)  
ECE 133 - Child Health, Safety and Nutrition (3.00)  
ENG 105 - English Composition I (3.00)

Term 2 (18.00 credits)
ECE 111 - Early Childhood Professionals II (1.00)  
ECE 158 - Early Childhood Curriculum I (3.00)  
ECE 159 - Early Childhood Curriculum II (3.00)  
ECE 243 - Early Childhood Guidance (3.00)  
ECE 262 - Early Childhood Field Experience (3.00)  
SPC 101 - Fundamentals of Oral Communication (3.00)  
FLS 104 - Spanish for Prof (Early Education) (2.00)

GRAPHIC SPECIALIST  
(Diploma -- 35 credits)

Term 1 (15.00 credits)
GRA 118 - Electronic Publishing (3.00)  
GRA 140 - Digital Imaging (Photoshop) (3.00)  
MMS 101 - Mass Media (3.00)  
JOU 171 - Introduction to Photography (3.00) or  
JOU 173 - Digital Photography (3.00)  
ART or JOU elective (3.00)

Term 2 (18.00 credits)
ART 127 - Digital Illustration (3.00)  
GRA 121 - Digital Drawing (Illustrator) (3.00)  
GRA 141 - Digital Imaging II (3.00)  
GRA 188 - Advertising Layout and Composition (3.00)  
ENG 105 - English Composition I (3.00)  
MAT 110 - Math for Liberal Arts (3.00)

Term 3 (2.00 credits)
GRA 932 - Internship (2.00)

HOSPITALITY SERVICES  
(Diploma -- 41 credits)

Term 1 (21.00 credits)
HCM 104 - Applied Food Service Sanitation (4.00)  
HCM 292 - Food Preparation (3.00)  
SPC 101 - Fund. of Oral Communications (3.00)  
CSC 110 - Intro to Computers (3.00)  
HCM 265 - Mathematics for Hospitality (3.00)  
HCM 591 - Housekeeping Management (3.00)  
HCM 705 - Hospitality Club Activities I (1.00)  
HSC 134 - First Aide/CPR (1.00)

Term 2 (20.00 credits)
BUS 161 - Human Relations (3.00)  
BUS 121 - Business Communications (3.00) or  
ENG 105 - English Composition I (3.00)  
HCM 141 - Food Production (5.00)  
HCM 595 - Managing Front Ofc Oper/Night Audit (4.00)  
HCM 707 - Hospitality Club Activities II (1.00)  
HCM 229 - Nutrition for the Life Cycle (4.00)

MARINE SERVICE TECHNOLOGY  
(Diploma -- 45 credits)

Term 1 (19.00 credits)
MSE 147 - Introduction to Marine Service (2.00)  
MSE 149 - Introduction to Marine Rigging (2.00)  
MSE 153 - Fund of Electricity Theory and Lab (3.00)  
MSE 154 - Intro to Power Generators (1.00)  
MSE 183 - Personal Water Craft Systems (3.00)  
MSE 151 - Shop Safety and Procedures (1.00)  
MSE 164 - Marine Engines 2 & 4-Stroke Theory (2.00)  
MSE 165 - Marine Engines 2 & 4-Stroke Theory L (2.00)  
BUS 161 - Human Relations (3.00)

Term 2 (17.00 credits)
COM 723 - Workplace Communications (3.00)  
MSE 148 - Introduction to Marine Detailing (1.00)  
MSE 169 - Marine Drive Systems Theory and Lab (3.00)  
MSE 173 - Marine Fuel Systems Theory and Lab (3.00)  
MSE 159 - Snowmobile Systems (3.00)  
MSE 190 - Marine Electrical Systems Theory/ Lab (4.00)

Term 3 (9.00 credits)
MSE 932 - Internship (6.00)  
MAT 772 - Applied Math (3.00)

MASSAGE THERAPY  
(Diploma -- 39 credits)

Term 1 (14.00 credits)
HSC 114 - Medical Terminology (3.00)  
MST 101 - Health and Wellness - MT (1.00)  
MST 103 - Intro to Swedish Massage (3.00)  
MST 152 - Chair Massage (1.00)  
BIO 163 - Essentials of Anatomy and Physiology (4.00)  
COM 725 - Workplace Communications (2.00)

Term 2 (17.00 credits)
MST 110 - Pathology for Massage Therapy (2.00)  
MST 113 - Kinesiology/Anatomy & Movement for Massage Therapy (3.00)  
MST 121 - Reflexology (1.00)  
MST 123 - Sports Massage (3.00)  
MST 138 - Spa Bodywork I (3.00)  
MST 141 - Geriatric Massage (1.00)  
MST 143 - Intermediate Massage (3.00)  
MST 149 - Pregnancy/Infant Massage (1.00)

Term 3 (8.00 credits)
BUS 160 - Human Relations (2.00)  
MST 151 - Business - Massage Therapy (1.00)  
MST 153 - Deep Tissue Massage (3.00)  
MST 159 - Ethics - Massage Therapy (1.00)  
MST 810 - Massage Clinic (1.00)
**MEDICAL ASSISTANT SPECIALIST**  
(Diploma -- 45 credits)  
The Medical Assistant Diploma and AAS Degree Programs, Spencer Campus, are accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Curriculum Review Board of the American Association of Medical Assistants Endowment (AAMAE).

**Commission on Accreditation of Allied Health Education Programs (CAAHEP)**  
1361 Park Street  
Clearwater, FL 33756  
Phone: 727-210-2350

**Term 1 (21.00 credits)**  
- BIO 168 - Human Anatomy & Physiology I (4.00)  
- CSC 110 - Introduction to Computers (3.00)  
- COM 725 - Communications Skills (2.00) or  
- ENG 105 - English Composition I (3.00)  
- HSC 114 - Medical Terminology (3.00)  
- HSC 151 - Dosage Calculations (1.00)  
- MAP 111 - Medical Office Management I (3.00)  
- MAP 512 - Medical Assisting Pharmacology (2.00)

**Term 2 (20.00 credits)**  
- BIO 173 - Human Anatomy & Physiology II (4.00)  
- HSC 217 - Introduction to Pathology (3.00)  
- MAP 117 - Medical Office Management II (3.00)  
- MAP 128 - Automated Medical Office (2.00)  
- MAP 233 - Medical Laboratory Procedures (4.00)  
- MAP 330 - Career Preparation Medical Assistants (1.00)  
- MAP 343 - Clinical Assisting II (3.00)

**Term 3 (4.00 credits)**  
- HSC 192 - Emergency Preparedness (1.00)  
- MAP 941 - Medical Assistant Practicum (3.00)

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**MEDICAL OFFICE TECHNOLOGY**  
(Diploma -- 41 credits)

**Term 1 (20.00 credits)**  
- BIO 168 - Human Anatomy & Physiology I (4.00)  
- CSC 110 - Introduction to Computers (3.00)  
- COM 725 - Communications Skills (2.00) or  
- ENG 105 - English Composition I (3.00)  
- HIT 244 - CPT Coding (3.00)  
- HSC 114 - Medical Terminology (3.00)  
- MAP 111 - Medical Office Management I (3.00)  
- MAP 512 - Medical Assisting Pharmacology (2.00)

**Term 2 (21.00 credits)**  
- ADM 220 - Career Development Skills (1.00)  
- BIO 173 - Human Anatomy & Physiology II (4.00)  
- BUS 110 - Business Math and Calculators (3.00)  
- HIT 245 - Basic ICD-9-CM Coding (3.00)  
- HIT 601 - Medical Transcription (2.00)  
- HSC 217 - Introduction to Pathology (3.00)  
- MAP 128 - Automated Medical Office (2.00)  
- MAP 141 - Medical Insurance (3.00)

**Term 3 (5.00 credits)**  
- BUS 932 - Internship (5.00)

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**PHOTOGRAPHY SPECIALIST**  
(Diploma -- 36 credits)

**Term 1 (16.00 credits)**  
- JOU 171 - Introduction to Photography (3.00)  
- JOU 173 - Digital Photography (3.00)  
- ENG 105 - English Composition I (3.00)  
- SPC 101 - Fundamentals of Oral Communication (3.00)  
- Science (4.00)

**Term 2 (20.00 credits)**  
- ART 286 - Introduction to Portrait Photography (3.00)  
- BUS 161 - Human Relations (3.00)  
- JOU 177 - News, Forensics & Advertising Photo (3.00)  
- JOU 941 – Journalism & Photography Practicums (2.00)  
- JOU 180 - Digital Imaging for Profession (3.00) or  
- GRA 141 - Digital Imaging II (3.00)  
- MGT 110 - Small Business Management (3.00) or  
- MGT 101 - Principles of Management (3.00)  
- MKT 150 - Principles of Advertising (3.00) or  
- MKT 140 - Principles of Selling (3.00)

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**POWERSPORTS AND POWER EQUIPMENT TECHNOLOGY**  
(Diploma -- 44 credits)

**Term 1 (19.00 credits)**  
- MSE 143 - Small Engines Theory (3.00)  
- MSE 146 - Small Engines Laboratory (3.00)  
- MOT 151 - Shop Safety and Procedures (1.00)  
- MOT 153 - Fundamentals of Electricity (3.00)  
- MSE 155 - Drive System Fund Theory/Lab (3.00)  
- BUS 161 - Human Relations (3.00)  
- HSC 134 - First Aid/CPR (1.00)  
- WEL 334 - Trade and Industry Welding (2.00)
### Term 2 (18.00 credits)
- COM 723 - Workplace Communications (3.00)
- MOT 131 - Motorcycle Engines 2 & 4 Stroke Theory (3.00)
- MOT 129 - Motorcycle Engines 2& 4 Stroke Lab (2.00)
- MOT 139 - Motorcycle Fuel Systems Theory/Lab (3.00)
- MOT 144 - Motorcycle Drive Systems, Chassis & Suspension Theory & Lab (4.00)
- MAT 772 - Applied Math (3.00)

### Term 3 (7.00 credits)
- MOT 146 - Motorcycle Ignition and Electrical Systems Theory and Lab (3.00)
- MOT 910 - Cooperative Work Experience (4.00)

### PRACTICAL NURSING
(Diploma -- 46 credits)

<table>
<thead>
<tr>
<th>Program Pre-requisites (7.00)</th>
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<tbody>
<tr>
<td>BIO 168 - Human Anatomy &amp; Physiology I (4.00)</td>
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<tr>
<td>HSC 172 - Nurse Aide (3.00)</td>
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<th>Term 1 (16.00 credits)</th>
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<tbody>
<tr>
<td>BIO 173 - Human Anatomy &amp; Physiology II (4.00)</td>
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<tr>
<td>BIO 151 - Nutrition (3.00)</td>
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<tr>
<td>HSC 153 - Concepts in Pharmacology (3.00)</td>
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<tr>
<td>HSC 151 - Dosage Calculations (1.00)</td>
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<tr>
<td>PNN 664 - Practical Nursing I (4.00)</td>
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<tr>
<td>PNN 665 - Practical Nursing I Clinical (1.00)</td>
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<tr>
<td>HSC 202 - Health Informatics (2.00)</td>
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<tr>
<td>PSY 121 - Developmental Psychology (3.00)</td>
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<td>PNN 662 - Practical Nursing II (7.00)</td>
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<td>PNN 666 - Practical Nursing II Clinical (3.00)</td>
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<td>COM 725 - Workplace Communications (2.00)</td>
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<tr>
<td>PNN 663 - Practical Nursing III (4.00)</td>
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<td>PNN 667 - Practical Nursing III Preceptorship (2.00)</td>
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### SALES AND MARKETING
(Diploma -- 38 credits)

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<tr>
<td>BUS 161 - Human Relations (3.00)</td>
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<tr>
<td>BUS 175 - Business Seminar I (1.00)</td>
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<tr>
<td>MKT 140 - Principles of Selling (3.00)</td>
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<td>MKT 142 - Consumer Behavior (3.00)</td>
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<td>MKT 155 - Visual Merchandising (4.00)</td>
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<tr>
<td>MKT 290 - Professionalism I: DEX/DECA (1.00)</td>
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<td>MKT 938 - On-The-Job Training (2.00)</td>
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<tr>
<td>ACC 111 - Introduction to Accounting (3.00)</td>
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<tr>
<td>MGT 101 - Principles of Management (3.00)</td>
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<td>MKT 150 - Principles of Advertising (3.00)</td>
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<td>MKT 110 - Principles of Marketing (3.00)</td>
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<tr>
<td>MKT 291 - Professionalism II: DEX/DECA (1.00)</td>
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<td>ENG 105 - English Composition I (3.00)</td>
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<thead>
<tr>
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<tbody>
<tr>
<td>BUS 932 - Internship (5.00)</td>
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</table>

### SURGICAL TECHNOLOGY
(Diploma -- 44 credits)

The Surgical Technology Diploma and AAS Degree Programs, Spencer Campus, are accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Accreditation Review Committee on Education Surgical Technology and Surgical Assisting (ARCSTSA)

Commission on Accreditation of Allied Health Education Programs (CAAAHP)
1361 Park Street
Clearwater, FL 33756
Phone: 727-210-2350

Accreditation Review Committee on Education in Surgical Technology & Surgical Assisting (ARCSTSA)
6 W. Dry Creek Circle, Suite #110
Littleton, CO 80120
Phone: 303-694-9262

<table>
<thead>
<tr>
<th>Program pre-requisites: (7.00 credits)</th>
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<tbody>
<tr>
<td>HSC 114 - Medical Terminology (3.00)</td>
</tr>
<tr>
<td>BIO 163 - Ess of Anatomy and Physiology w/Lab (4.00) or BIO 168/173 - Human Anatomy &amp; Phy I and II (8.00)</td>
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<table>
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<tbody>
<tr>
<td>SUR 123 - Patient Care Concepts (2.00)</td>
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<td>SUR 129 - Surgical Foundations (6.00)</td>
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<td>SUR 131 - Surgical Foundations Lab (4.00)</td>
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<td>SUR 430 - Microbiology For Surgical Tech (2.00)</td>
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<td>COM 725 - Communications Skills (2.00)</td>
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<tr>
<td>ADM 220 - Career Development Skills (1.00)</td>
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<td>SUR 227 - Surgical Procedures Lab (2.00)</td>
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<td>SUR 223 - Surgical Procedures Lecture-Course (6.00)</td>
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<tr>
<td>SUR 420 - Pharmacology for the Surgical Tech (2.00)</td>
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<td>SUR 517 - Surgical Technology Practicum I (3.00)</td>
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<table>
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<tbody>
<tr>
<td>BUS 161 - Human Relations (3.00)</td>
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<td>SUR 519 - Surgical Technology Practicum (4.00)</td>
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### WATER QUALITY AND SUSTAINABLE AQUATIC RESOURCES
(Diploma -- 37 credits)

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<tr>
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<td>EVS 112 - Biological Science for Water Quality (4.00)</td>
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<td>EVS 214 - Water Quality Analysis (4.00)</td>
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<td>EVS 224 - Water Distribution &amp; Wastewater Collection Sys (4.00)</td>
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<tr>
<td>SER 114 - Blueprint Reading (1.00)</td>
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<tr>
<td>SER 124 - Industrial Safety and Workplace Env (1.00)</td>
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<table>
<thead>
<tr>
<th>Term 2 (20.00 credits)</th>
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<tbody>
<tr>
<td>BUS 121 - Business Communications (3.00)</td>
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<tr>
<td>EVS 113 - Physical Science for Water Quality (4.00)</td>
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<tr>
<td>EVS 173 - Introduction to Water Resources (3.00)</td>
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<tr>
<td>EVS 274 - Water Processing (5.00)</td>
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<tr>
<td>EVS 284 - Wastewater Treatment (5.00)</td>
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## WELDING
(Diploma -- 38 credits)

**Term 1 (18.00 credits)**
- BUS 161 - Human Relations (3.00)
- WEL 121 - Oxy Fuel Welding and Cutting (4.00)
- WEL 228 - Intro to Welding, Safety & Health of Welders: SENSE1 (1.00)
- WEL 254 - Welding Inspection & Testing Principles: SENSE1 (1.00)
- WEL 233 - Print Reading and Welding Symbol Interpretation: SENSE1 (3.00)
- WEL 275 - Shielded Metal Arc Welding II: SENSE1 (3.00)
- WEL 274 - Shielded Metal Arc Welding I: SENSE1 (3.00)

**Term 2 (20.00 credits)**
- COM 725 - Communications Skills (2.00)
- MAT 770 - Applied Math (2.00)
- WEL 179 - Special Processes/Procedures (3.00)
- WEL 244 - Gas Metal Arc Welding Short Circuit Transfer: SENSE1 (2.00)
- WEL 245 - Gas Metal Arc Welding Spray Transfer: SENSE1 (2.00)
- WEL 251 - Gas Tungsten Arc Welding for Carbon Steel: SENSE1 (2.00)
- WEL 252 - Gas Tungsten Arc Welding for Aluminum: SENSE1 (1.00)
- WEL 253 - Gas Tungsten Arc Welding for Austenitic Stainless Steel: SENSE1 (1.00)
- WEL 310 - Pipe Welding (5.00)

## WIND ENERGY AND TURBINE TECHNOLOGY
(Diploma -- 48 credits)

**Term 1 (21.00 credits)**
- BUS 161 - Human Relations (3.00)
- ELE 119 - Basic Electricity I (4.00)
- SER 114 - Blueprint Reading (1.00)
- SER 116 - Career Seminar (1.00)
- SER 124 - Industrial Safety and Workplace Env (1.00)
- MAT 743 - Technical Math (3.00)
- WTT 115 - Field Training and Project Operations (4.00)
- WTT 104 - Introduction to Wind Energy (4.00)

**Term 2 (21.00 credits)**
- BUS 121 - Business Communications (3.00)
- EGT 146 - Hydraulics (3.00)
- ELE 136 - Basic Electricity II (4.00)
- ELE 226 - Electric Motors and Generators (4.00)
- PHY 709 - Introduction to Technical Physics (4.00)
- WTT 133 - Wind Turbine Mechanical Systems (3.00)

**Term 3 (6.00 credits)**
- WTT 946 - Wind Energy & Turbine Technology Internship II (6.00)

## Certificate Programs

The certificates listed below are designed to enhance existing degrees. These certificates may not provide an individual without prior education with all the course work necessary for entry into their desired career field. For more information please contact the program advisor.

### CERTIFIED PROFESSIONAL BOOKKEEPER
(Cert -- 28 credits)

**Term 1 (16.00 credits)**
- ACC 221 - Cost Accounting (3.00) or ACC 261 - Income Tax Accounting (3.00)
- ACC 131 - Principles of Accounting I (4.00)
- ACC 161 - Payroll Accounting (3.00)
- ACC 929 - Individual Projects (2.00)
- BUS 175 - Business Seminar I (1.00)
- CSC 110 - Introduction to Computers (3.00)

**Term 2 (12.00 credits)**
- ACC 132 - Principles of Accounting II (4.00)
- ACC 310 - Computer Accounting (2.00) or ACC 311 - Computer Accounting (3.00)
- ACC 702 - Certified Bookkeeper Review (4.00)
- BUS 115 - Business Correspondence (2.00) or BUS 121 - Business Communications (3.00)

### WELDING CERTIFICATE
(Cert -- 21 credits)

**Term 1 (21.00 credits)**
- BUS 161 - Human Relations (3.00)
- WEL 121 - Oxy Fuel Welding and Cutting (4.00)
- WEL 228 - Intro to Welding, Safety & Health of Welders: SENSE1 (1.00)
- WEL 254 - Welding Inspection & Testing Principles: SENSE1 (1.00)
- WEL 233 - Print Reading and Welding Symbol Interpretation: SENSE1 (3.00)
- WEL 275 - Shielded Metal Arc Welding II: SENSE1 (3.00)
- WEL 274 - Shielded Metal Arc Welding I: SENSE1 (3.00)
Course Numbers

The Iowa community colleges have a common course numbering system for all credit courses offered by Iowa community colleges. The numbering system facilitates transfer and articulation processes for Iowa community college students.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
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<tbody>
<tr>
<td>Discipline prefix of program or subject</td>
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<tr>
<td>000-099</td>
<td>developmental courses</td>
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<tr>
<td>100-899</td>
<td>courses intended to meet specific requirements for certificates, diplomas, and degrees in career and technical and transfer programs</td>
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<tr>
<td>900-999</td>
<td>generic focus courses such as special topics, OJT, internships</td>
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Key to Course Prefixes

<table>
<thead>
<tr>
<th>ACC</th>
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<tbody>
<tr>
<td>ADM</td>
<td>Administrative Assistant</td>
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<td>ADN</td>
<td>Associate Degree Nursing</td>
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<td>AGA</td>
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<td>AGB</td>
<td>Agriculture-Farm Management</td>
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<td>AGC</td>
<td>Agriculture-Comprehensive</td>
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<td>AGH</td>
<td>Agriculture-Horticulture</td>
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<td>AGM</td>
<td>Agriculture-Mechanics</td>
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<tr>
<td>AGP</td>
<td>Agriculture-Precision Ag</td>
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<td>Agriculture-Animal Science</td>
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<td>Agriculture-Vet Tech</td>
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<td>ANT</td>
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<td>ATR</td>
<td>Automation Tech &amp; Robotics</td>
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<td>BCA</td>
<td>Business Computer Applications</td>
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<td>COM</td>
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<td>CRJ</td>
<td>Criminal Justice</td>
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<td>CRR</td>
<td>Collision Repair &amp; Refinish</td>
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<td>Computer Science</td>
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<td>DRA</td>
<td>Film and Theatre</td>
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<tr>
<td>DSV</td>
<td>Disability Services</td>
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<td>Graphic Communications</td>
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<td>HCM</td>
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<td>HCR</td>
<td>Heating, Vent, &amp; Air Cond.</td>
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<td>MSE</td>
<td>Marine Service Technology</td>
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<td>Music-Applied</td>
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<td>PAR</td>
<td>Parts Dist. &amp; Inv. Control</td>
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<td>PEA</td>
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<tr>
<td>PEC</td>
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<td>General Phys Ed and Health</td>
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<td>Physical Education Training</td>
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<td>WEL</td>
<td>Welding</td>
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<td>WTT</td>
<td>Wind Energy &amp; Turbine Tech</td>
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</table>
ACCOUNTING

ACC-111 Intro to Accounting, 3 cr.
Introduces the basic principles of accounting and the recording of simple business transactions using the double entry system. Includes the accounting procedures of journalizing transactions, posting to the ledger, making a trial balance, creating receipt and disbursement of cash.

ACC-131 Principles of Accounting I, 4 cr.
Accounting methods, principles and terminology needed in the preparation and understanding of the financial statements of a business enterprise. Includes a study of partnership accounting.

ACC-132 Principles of Accounting II, 4 cr.

ACC-161 Payroll Accounting, 3 cr.
A study of payroll records and payroll taxes imposed by state and federal agencies.

ACC-221 Cost Accounting, 3 cr.
Develops an understanding of accounting methods for manufacturing and service enterprises including analysis techniques for management. Prerequisite: ACC-132

ACC-231 Intermediate Accounting I, 4 cr.
Reviews accounting procedures and reporting processes, including an in-depth analysis of generally applied accounting principles. Topics include the income statement, balance sheet, revenue recognition, cash and marketable securities, and notes and accounts receivable. Prerequisite: ACC-132

ACC-232 Intermediate Accounting II, 4 cr.
Continuation of ACC-231, including in-depth analysis of generally accepted accounting principles pertaining to liabilities, equities, revenues and expenses. Prerequisite: ACC-231

ACC-261 Income Tax Accounting, 3 cr.
Introduces the general theory and procedures pertaining to state and federal taxation. Studies application of laws as they pertain to income of individuals and sole proprietorships, gifts, estates and Social Security.

ACC-310 Computer Accounting, 2 cr.
Provides students with a basic understanding of the accounting cycle on microcomputers. Topics include ledgers, accounts receivable and payable, payroll, inventory and depreciation. An integrated accounting software package is introduced.

ACC-311 Computer Accounting, 3 cr.
Studies payroll records and payroll taxes imposed by state and federal agencies. The course will focus on computerized accounting records, including general ledger, accounts receivable, accounts payable, depreciation and payroll systems.

ACC-702 Certified Bookkeeper Review, 4 cr.
The course is designed to prepare students for successful completion of the Certified Bookkeeper National Certification Examination. Included in the course is a review of adjusting entries, correction of accounting errors, payroll accounting, depreciation, inventory, and internal controls and fraud prevention. Prerequisite: ACC-131

ACC-929 Individual Projects, 2 cr.
Provides experience in the application of accounting principles to a simulated retail business. P/Q grading.

ACC-941 Practicum, 3 cr.
On-the-job training experience provides the student with the opportunity to apply accounting concepts and procedures in a work situation and the opportunity to develop proper work attitudes.

ADMINISTRATIVE ASSISTANT

ADM-106 Intro to Keyboarding, 2 cr.
Teaches the basic computer keyboard using the touch method to develop speed and accuracy.

ADM-116 Keyboarding II, 3 cr.
Tabulations, letters, reports and other production work for students with previous instruction in keyboarding, but with insufficient skill to qualify for the next course.

ADM-132 Bus Math & Calculators, 2 cr.
Provides skills and competencies in basic mathematical functions and in the operation of electronic calculators. Emphasis is on solving business problems and in developing speed and accuracy.

ADM-162 Office Procedures, 3 cr.
Includes modern office skills and technologies, including word processing, automation, records management, reprographics, communication services, time management and methods of handling stress, meeting and travel arrangements and career advancement.

ADM-220 Career Development Skills, 1 cr.
Students will learn employability skills while developing professional and leadership skills. Students will create a resume and review positive interview skills while reviewing for the national certification exam. Students will also review concepts like bioethics, risk management, teamwork, group dynamics, and critical thinking and leadership in order to apply them to their own professional development plan.

ADM-254 Business Professionalism, 1 cr.
Introduction to Business Professionals of America activities, which includes preparation for state and national competitive events, leadership and professional development. P/Q grading.

ADM-255 Business Professionalism II, 1 cr.
Business Professionals of America prepares the student for their chosen profession by assisting them in their leadership and professional development for the workplace. Continuation of ADM-254. P/Q grading.

ADM-354 Business Professionalism III, 1 cr.
Continuation of ADM-255. P/Q grading.

ADM-355 Business Professionalism IV, 1 cr.
Continuation of ADM-354. P/Q grading.

ADM-936 Occupational Experience, 5 cr.
Apprenticeship in office systems. Students work as regular employees in offices supervised by staff members. This work experience is introductory to meet the student’s abilities and career objectives.
practically field experience arranged to include office work, direct leadership, and procedures related to career work. Prerequisite: Permission of the instructor.

Associate Degree Nursing

ADN-106 Success in Nursing, 1 cr.
Prepares the nursing student for completion of the Associate Degree Nursing program. The student will explore the history of nursing to gain further insight into the profession. Emphasis is on maintaining a positive attitude, developing efficient study skills, time management, organizational tips, and establishing effective test taking strategies. The student will be introduced to: use of the computer, library services, APA format, and principles of research and information retrieval via the internet.

ADN-107 Introduction to Nursing Concepts, 4 cr.
Introduces concepts of caring, human needs, and the nursing process. The roles of the registered nurse as provider of care, manager of care, and member of the profession of nursing will be introduced. Concepts of critical thinking and evidence based practice will be integrated throughout the course.

ADN-108 Introduction to Nursing Concepts Lab, 2 cr.
Introduces the student to beginning nursing skills. The roles of the nurse as provider of care, manager of care, and member of the profession of nursing will be explored. The student will demonstrate nursing skills such as: sterile glove placement, catheter insertion, sterile dressing changes, vital signs, assessment, nasogastric tube placement, medication administration and intravenous placement. The student will discuss and demonstrate problem solving strategies and care associated with each skill.
P/Q grading.

ADN-111 Nursing Concepts I, 7 cr.
Nursing Concepts I is a class/lab/clinical course that introduces the role of the registered nurse considering history, trends and comportment through a caring perspective. The roles of the registered nurse will be discussed related to safety, legal implications, and collaborative practice throughout the client’s lifespan. The nursing process and health promotion will be introduced related to human needs and the physical assessment. The conceptual focus includes oxygenation, perfusion, elimination, tissue integrity, mobility, sensory alterations and pain. The student will practice and perform nursing skills in the lab and clinical settings while caring for simple client conditions.

ADN-129 Bridging Into the Assoc Degree Nursing Program, 2 cr.
Bridging into the Associate Degree Nursing Program is a lecture/lab course that facilitates the role change from a practical nurse to a registered nurse. Concepts of critical thinking and the nursing process, human needs, and caring as they relate to the registered nurse will be integrated throughout the course. The student will demonstrate the following skills as they relate to the role of the registered nurse: assessment, nasogastric tube insertion, intravenous insertion and care, and intravenous medication administration.

ADN-212 Nursing Concepts II, 7 cr.
Nursing Concepts II is a class/clinical course that builds upon nursing concepts related to human needs with an emphasis on a safe and effective environment. The student will demonstrate caring behaviors while learning about physiologic adaptations related to perioperative, comfort, pain, infection, fluid and electrolyte, acid/base, metabolism, oxygenation, perfusion, elimination, digestion, and mobility as related to the Medical-Surgical client throughout the lifespan. The nursing process will be utilized throughout the course while applying principles of teaching and learning.

ADN-213 Pharmacology Applications, 4 cr.
Pharmacology Applications is a class/lab designed to provide the learner knowledge of pharmacodynamics, pharmacokinetics and pharmacotherapeutics as it relates to the client lifespan. Major drug classifications will be discussed in relation to physiologic systems, with emphasis on application of these agents. Medication administration including oral, parenteral, enteral, and intravenous therapy will be discussed and applied.

ADN-314 Nursing Concepts III, 7 cr.
Nursing Concepts III is a class/clinical course that enhances the concepts of critical thinking, complex nursing interventions, and nursing skills using caring behaviors throughout the client’s lifespan. The student will relate concepts of physiologic human needs including: oxygenation, perfusion, developmental and pediatric alterations, intracranial regulation, immunity and inflammation, fluid and electrolytes, cellular regulation, and sensory perception. The role of the registered nurse will be discussed related to maintaining a safe and effective environment through health promotion strategies in case management, utilization review, and quality improvement.

ADN-413 Behavioral Health Concepts, 4 cr.
Behavioral Health Concepts is a classroom/clinical course that introduces foundational nursing practice for the client with human needs of behavioral health and/or mental illness. The student will display caring behaviors while using critical thinking, evidence based practice, and the nursing process to promote a safe and effective environment for clients with behavioral health issues. The student will explore the nurse’s role as provider of care, manager of care, and member of the profession of nursing through communication, health promotion, and maintenance strategies as the student cares for behavioral health clients in the clinical setting.

ADN-414 Maternal Newborn Concepts, 4 cr.
Maternal Newborn Concepts is a classroom/clinical course that introduces nursing skills necessary while caring for clients with reproductive and family planning health promotion and maintenance needs. The student will provide a safe and effective environment, use the nursing process, demonstrate critical thinking, evidence based practice, and communication while providing care for the human needs of maternal newborn clients. The student will explore the nurse’s role as provider of care, manager of care and member of the profession of nursing as the student cares for maternal newborn clients in the clinical setting.

ADN-415 Nursing Concepts IV, 7 cr.
Nursing Concepts IV is a class/clinical or class/preceptorship course that prepares the student for entry level nursing practice by focusing on nursing judgment and assimilation into the profession. Emphasis is on the role of the nurse as the provider and manager of care with simple to complex client conditions throughout the lifespan using evidence based practice interventions while demonstrating positive communication. Management of simple to complex human needs including: oxygenation, perfusion, intracranial regulation, mobility, inflammation/infection/immunity, tissue integrity, cellular regulation, and comfort/psychosocial. Through management of various clients, the student will explore contemporary nursing practice topics.

ADN-467 Mental Health Concepts, 5 cr.
Mental Health Concepts is a classroom/clinical course that provides an overview of the nursing process utilized in care of clients with mental health needs, addressing assessment, health promotion, illness prevention, and crisis management. The student will
develop nursing skills necessary to provide individualistic care to clients with mental health needs. The nurse's role as provider of care, manager of care and member of the profession of nursing will be explored as the student cares for a variety of mental health clients. Critical thinking skills and evidence based practice are utilized in the classroom and clinical setting. Current issues related to mental health care across the lifespan in multicultural populations will be explored.

ADN-468 Women's Health Concepts, 5 cr.
Women’s Health Concepts is a classroom/clinical course that introduces topics of reproduction, sexuality, family planning and antepartum, intrapartum, postpartum, and newborn care. The student will develop nursing skills necessary to provide individualistic care to clients experiencing reproductive needs including childbearing. The nurse’s role as provider of care, manager of care and member of the profession of nursing will be explored as the student cares for childbearing clients. Critical thinking and evidenced based practice will be integrated throughout the course. Current issues related to reproduction and childbearing in multicultural populations will be explored.

ADN-514 Care of the Aging Adult, 2 cr.
Provides an overview on the principles of aging. This course increases the ability of an entry level nurse in assessment, management and collaboration of care for a diverse aging population. Specific topics include physiologic changes, polypharmacy, advanced directives, safety, nutrition, social functioning, and end of life issues.

ADN-515 Care of the Aging Adult Clinical, 1 cr.
Further addresses the competencies needed when caring for a diverse aging population. The nurse's role as provider of care, manager of care and member of the profession of nursing will be explored as the student cares for the aging adult in a variety of settings. Clinical settings may include long-term care, assisted living, and community based environments. Critical thinking skills and evidence based practice are utilized in the clinical setting when caring for clients. P/Q grading.

ADN-564 Basic Concepts in Medical Surgical Nursing, 4 cr.
This course provides an overview of the principles of care for individuals throughout the lifespan. This course is designed to expand and build upon the skills and knowledge acquired in Introduction to Nursing Concepts. Concepts of caring, human needs and the nursing process will be further explored. Emphasis is placed on the care of a variety of clients in all stages of development. Critical thinking and evidence based practice will be integrated throughout the course. Specific topics include: fluid and electrolytes, acid/base balance, immunity, infection, inflammation, cellular regulation, pain/comfort, medical/surgical asepsis including perioperative care, cultural competence and grief and loss. The teaching role of registered nurse related to health promotion and lifestyle choices will also be discussed.

ADN-565 Basic Concepts in Med Surg Nrs Clin, 4 cr.
This course utilizes the nursing skills in caring for individuals throughout the lifespan. This course builds upon the skills and knowledge acquired in Introduction to Nursing Concepts Lab. The nurse's role as provider of care, manager of care and member of the profession of nursing will be explored as the student cares for a variety of clients in a medical-surgical clinical setting. Cultural diversity and issues related to end of life care are addressed. Critical thinking skills and evidence based practice are utilized in the clinical setting when caring for clients. P/Q grading.

ADN-567 Adv Concepts in Medical Surgical Nrs, 7 cr.
This course further builds upon the core concepts of caring, human needs, and the nursing process. The student will learn to care for clients in all stages of development who require increasingly complex nursing interventions and skills. Critical thinking and evidence based practice will be integrated throughout the course. Specific topics include: oxygenation, perfusion, digestion, elimination, metabolism, intracranial regulation, mobility, cellular regulation, sensory, fluid, and electrolyte balance.

ADN-568 Advanced Concepts in Med Surgical Nrs Clin, 2 cr.
Course builds upon the role of the nurse as provider of care, manager of care, and member of the profession of nursing. The student cares for a variety of clients in all stages of development requiring increasingly complex nursing interventions and skills. Critical thinking skills and evidence based practice are utilized in the clinical setting when caring for clients. P/Q grading.

ADN-590 Care of the Critically Ill or Injured Client, 3 cr.
Provides an overview of the basic principles of critical care. This course is designed to enhance the ability of an entry-level nurse in performing the initial assessment, management, and stabilization of clients with life-threatening illness or injury. Advanced concepts of critical thinking and evidence based practice will be integrated throughout the course. Specific topics include: oxygenation, perfusion, elimination, metabolism, intracranial regulation, mobility, thermoregulation, inflammation/infection, tissue integrity, immunity, hematology, comfort, and disaster nursing.

ADN-813 Professional Nursing Clinical, 1 cr.
This course, Professional Nursing Clinical will assist the student in progressing into the entry level role of a registered nurse. The student will plan, implement, and evaluate care to assigned clients in an acute care setting under the supervision of a clinical instructor utilizing critical thinking skills and demonstrating positive communication. P/Q grading.

ADN-814 Professional Nursing Preceptorship, 1 cr.
This course, the Professional Nursing Preceptorship, will assist the student in progressing into the entry level role of a registered nurse. The student will work with a preceptor to plan, implement, and evaluate care to assigned clients in a patient care setting utilizing critical thinking skills and demonstrating positive communication. The student will be selected for this course based on academic and clinical performance. P/Q grading.

ADN-816 Professional Nursing Clinical, 2 cr.
This course, Professional Nursing Clinical will assist the student in progressing into the entry level role of a registered nurse. The student will plan, implement, and evaluate care to assigned clients in an acute care setting under the supervision of a clinical instructor utilizing critical thinking skills and demonstrating positive communication. The student will be selected for this course based on academic and clinical performance.

ADN-817 Professional Nursing Preceptorship, 2 cr.
This course, Professional Nursing Preceptorship will assist the student in progressing into the entry level role of a registered nurse. The student will work with a preceptor to plan, implement, and evaluate care to assigned clients in a patient care setting utilizing critical thinking skills and demonstrating positive communication. The student will be selected for this course based on academic and clinical performance.

ADN-820 The Professional Nurse, 2 cr.
Prepares the student for entry level professional practice. Areas of focus include: management, delegation, legal/ethical issues, conflict management and job seeking skills. The roles of the registered nurse as provider of care, manager of care, and member of the profession of nursing will be explored.
Agriculture-Agronomy

AGA-114 Principles of Agronomy, 3 cr.
Covers the basic principles of crop production, including classification, soil-plant interrelationships and growth process in response to environment.

AGA-131 Plant Physiology, 2 cr.
Course acquaints students with the activities of a complex plant during growth and reproduction and furthers the understanding of how these activities affect the normal production practices – planting, spraying, fertilizing, harvesting, etc.

AGA-154 Fundamentals of Soil Science, 3 cr.
An introduction to basic soil formation, classification, physical properties, water, organic matter, pH, and fertility.

AGA-156 Introduction to Soils, 3 cr.
Introduction to basic soil formation, soil component parts, classification, soil productivity characteristics, soil sampling, soil test interpretation, soil management and soil amendments.

AGA-218 Grain Harvest Hdlg Drying Equipment, 2 cr.
Course designed to give theoretical knowledge and practical experience in the operation of a combine, grain drying and grain storing equipment.

AGA-283 Pesticide Application Cert, 2 cr.
Preparation for the student to pass the state of Iowa Custom Applicators Core Manual examination. Includes safe use and handling of pesticides.

AGA-284 Pesticide Application Cert, 3 cr.
Preparation for the student to pass the state of Iowa Custom Applicators Core Manual examination. Includes safe use and handling of pesticides.

AGA-352 Soil Science & Fertilizer, 2 cr.
Studies soil fertilization, with emphasis on fertilizer material and applications, blending, soil test recommendations and handling in meeting crop needs.

AGA-355 Advanced Soil Fertility, 2 cr.
Course teaches the understanding of the manufacture of fertilizer, physical and chemical characteristics, materials and handling, and new technologies in application of fertilizers, including equipment and materials.

AGA-374 Pest Identification, 1 cr.
Collection and identification of weed and insect pests affecting corn and soybeans.

AGA-375 Integrated Crop Management, 2 cr.
Assists the student in developing the concepts of integrated pest management as they relate to cultural, mechanical, chemical and biological controls.

AGA-840 Agronomy Lab, 1 cr.
An individualized course for students wishing to develop a more in-depth or specialized study of agronomic information.

Agriculture-Farm Management

AGB-194 Beginning Sales, 2 cr.
Basic selling techniques, with emphasis on retail selling, role playing in sales situations and video playback critique.

AGB-210 Agricultural Law, 2 cr.
Introduction to business law which interprets the rights and social forces of business, society, government and contracts.

AGB-281 Computerized Agricultural Accounting, 1 cr.
Preparation for using a versatile computerized farm accounting system.

AGB-308 Farm Machinery Mgt Lab, 1 cr.
An individualized lab for students concurrently enrolled in AGB-309. Students explore programs for their own farm operations using software programs for machinery replacement strategies and the integrated crop management database.

AGB-327 Principles of Farm Business Management, 2 cr.
Current principles and practices of farm management. Production enterprise budgets, partial budgets and cash flow budgets are explored.

AGB-436 Grain Merchandising, 2 cr.
Studies livestock and grain futures marketing methods including product quality, methods and options.

AGB-437 Commodity Marketing, 3 cr.
Introduction to the commodity futures markets, with information on contract specifications, exchanges, basic trading information, and fundamental and technical market information.

AGB-439 Commodity Marketing Lab, 1 cr.
Strategies to increase proficiency in commodity and option marketing. Includes knowledge needed to sit for the Series 3 National Futures Examination.

AGB-466 Agricultural Finance, 3 cr.
Studies the sources and uses of farm credit to maximize farm income. Balance sheets, income statements and cost of financing options are a critical component of this class.

Agriculture-Comprehensive

AGC-103 Ag Computers, 3 cr.
This course includes basic knowledge of computer hardware and operation with an agriculture emphasis. Applications include word processing, spreadsheets, presentations, internet, email, Iowa Lakes Portal, eCompanion, Web Advisor and industry specific software.

AGC-111 Basic First Aid/Life Support, 1 cr.
Teaches American Red Cross basic first aid and American Heart Association cardiopulmonary resuscitation (CPR).

AGC-210 Employment Seminar, 1 cr.
Preparation of the farm management student for entry into the non-family farm job market.

AGC-215 Career Seminar, 1 cr.
Student observes an agribusiness operation without pay.

AGC-317 Agricultural Field Studies, 1 cr.
Studies the application of crop production and animal science production practices through field studies trips. Study trips will involve research farms, industry field days, extension field days and area farms.

AGC-936, 937, 938 Occupational Experience, II, III, 3 cr.
AGV-939  Occupational Experience IV, variable cr.
This course is a required on-the-job training experience in the
Agribusiness and Ag Production curriculum. Students work in an
agricultural setting gaining employment experiences while apply-
ing skills and technologies developed in the classroom.

**Agriculture-Horticulture**

AGH-106  Introduction to Horticulture, 3 cr.
This course introduces students to basic horticulture. Includes
plant anatomy and physiology, plant classification and identifica-
tion, and basic plant care.

**Agriculture-Mechanics**

AGM-102  Farm Equipment Maintenance, 1 cr.
Basic machinery maintenance and adjustment of equipment used in
agricultural business.

AGM-114  Hydraulics I, 2 cr.
A study of hydraulic components, including troubleshooting, re-
moval, repair and replacement.

AGM-115  Hydraulic Components Lab, 3 cr.
Troubleshooting, repairing, removing and replacing hydraulic

AGM-116  Fundamentals of Hydraulic, 3 cr.
Basic hydraulic laws and principles as they apply to the farm
equipment mechanics repair industry, how basic components work.

AGM-117  Fundamentals of Hydraulic Lab, 2 cr.
Using hydraulic test equipment, working at the test bench and
testing hydraulics on tractors. Co-requisite: AGM-117.

AGM-203  Ag Welding, 2 cr.
Introduction to electric, gas, wire and oxy-acetylene welding.

AGM-300  Fundamentals of Electricity, 3 cr.
Basic laws and principles of electricity as they apply to the farm
equipment repair industry, how basic components work.

AGM-301  Fundamentals of Electricity Lab, 2 cr.
Application of electrical laws and principles in checking electrical
systems on selected farm equipment using electrical test equip-
ment. Co-requisite: AGM-301.

AGM-302  Electrical Components, 2 cr.
Study of selected farm equipment electrical components and how
to troubleshoot, repair or remove, and replace them.

AGM-303  Electrical Components Lab, 3 cr.
Troubleshooting, repairing, removing and replacing electrical com-

AGM-411  Engine Repair, 6 cr.
Fundamentals of engine overhaul with the emphasis on diesel
gasoline engines.

AGM-413  Diesel Engine Overhaul, 5 cr.
Continuation of AGM-204 including design and operation of diesel
engines as well as rebuilding and troubleshooting procedures.
Lecture and laboratory.

AGM-416  Combine & Implement Repair & Adjustment, 4 cr.
Assembly, maintenance and adjustment of harvesting, planting,
tillage and spraying equipment. Lecture and laboratory.

AGM-420  Fuel Systems, 2 cr.
Study of technical principles and their application to fuel injec-
tion systems and turbos, including diagnostics, adjustments and

AGM-421  Fuel Systems Laboratory, 3 cr.
Application of technical principles to fuel systems and turbos,
including diagnosis, adjustments and overhaul procedures. Co-
requisite: concurrent registration in AGM-420.

AGM-425  Farm Equip Air Conditioning, 4 cr.
Theory, diagnosis and service of the complete air conditioning
system as applied to farm equipment Lecture and laboratory.

AGM-430  Differentials and Final Drives, 6 cr.
Technical principles and their application to drive shafts, univer-
sal joints, differentials, differential locks, final drives and PTO’s,
including diagnosis, repair, adjustment and overhaul procedures.

AGM-431  Transmissions, 7 cr.
Technical principles and their application to transmissions and
clutches, including diagnosis, repair, adjustment and overhaul
procedures.

AGM-850  Dealership Experience I, 2 cr.
A four week block of time in which each student works as a regu-
lar mechanic in a farm implement related dealership.

AGM-851  Dealership Experience, 2 cr.
A four week block of time in which each student works as a regu-
lar mechanic in a farm implement related dealership. This is the
second on-the-job training.

**Agriculture-Precision Ag**

AGP-242  Precision Ag Applications, 2 cr.
Studies the basic principles of business, including a brief overview
of some economic principles and methods of doing business.

AGP-329  Intro to GPS, 3 cr.
An introduction to the use of GPS and VRT as it impacts agricul-
tural producers. Students will use field mapping software and
GPS systems as part of the class.

**Agriculture-Animal Science**

AGS-113  Survey of the Animal Industry, 3 cr.
This course is an introduction in animal science including vari-
ous species and breeds of domestic animals and gives an appreci-
ation for the principles of production, biological principles,
stewardship, and animal industries as they relate to animal pro-
duction in the U.S. and the world.

AGS-114  Survey of the Animal Industry, 2 cr.
Introduction to the basics of livestock and poultry production.

AGS-240  Animal Health, 2 cr.
Animal environment and adaptation, animal health and animal
behavior as it relates to production and non-production species.

AGS-242  Animal Health, 3 cr.
Provides information about the cause, nature, prevention, and
treatment of the common health problems of farm animals. Identifi-
cies animal behavior and develops a herd health program.

AGS-319  Animal Nutrition, 3 cr.
Nutritional principles, digestive systems, composition and nutri-
tional characteristics of common feedstuffs, ration formulation and
recommended feeding programs for farm animals.
AGS-350 Artificial Insemination of Cattle, 1 cr.
To provide students with hands on skills in artificial insemination in beef cows.

AGS-400 Swine Production I, 2 cr.
A study of various aspects of swine production followed by in-depth units on farrowing management and production skills and techniques.

AGS-510 Swine Confinement Systems, 2 cr.
Course deals with swine management concerns in confinement operations.

AGS-511 Advanced Swine Confinement Mgt, 2 cr.
Basic introduction to swine confinement systems and management, including operation of equipment, ventilation systems and record keeping.

AGS-522 Swine Grower/Finisher Management, 2 cr.
Basic swine production skills and theory including nutrition, feeding, feed budgeting and feed handling, and general swine management practices to achieve successful grower-finisher and wean-to-finish management.

AGS-529 Swine Reproduction & Mgmt, 2 cr.
Provides an in-depth background for utilizing basic swine management principles.

AGS-556 Intro to Beef Cow Production, 2 cr.
Includes management, nutrition and breeding practices in a beef cow operation through classroom and practical experience.

AGS-557 Advanced Beef Cow Production, 2 cr.
Management of the beef cow herd with concentration on breed identification, reproduction, genetics, selection, calving management and record keeping systems.

AGS-558 Grazing Systems & Forage Mgmt, 2 cr.
Classroom and farm lab instruction covering establishment, management, economics and nutritional value of forage systems for ruminant animals.

AGS-559 Beef Feedlot Production, 2 cr.
Studies the buying, selling, nutrition, health and management of a beef feed lot operation.

AGS-561 Adv Beef Production, 2 cr.
Continuation of AGS-556.

AGS-562 Farm Enterprise Beef Feedlot, 1 cr.
A hands on lab were students gain skills in feeding management of beef enterprises.

AGS-563 Farm Enterprise Experience/Cow-Calf, 1 cr.
A hands on lab were students gain hands on skills in beef cow and calf management.

AGS-564 Farm Enterprise Forage Management, 1 cr.
A hands on lab were students gain skills in pasture management practices involving MIG ( Managed Intensive Grazing) and silage harvesting practices.

AGS-565 Farm Enterprise Swine Tech, 1 cr.
A hands on lab were students gain skills in basic production practices needed in the swine life cycle. (Breeding, farrowing, nursery and finishing)

AGS-566 Farm Enterprise Swine Management, 1 cr.
A hands on lab were students gain skills needed to effectively manage Technician level employees. Also includes production record data input, records analysis and development of work lists to manage the swine operation.

Agriculture-Vet Tech

AGV-103 Introduction to Veterinary Science, 3 cr.
This course introduces the basics of animal identification, husbandry, behavior, safety and healthcare. Career opportunities in animal-related fields are explored. The student will also complete the American Red Cross Animal First Aid and CPR certification.

AGV-112 Veterinary Tech Anatomy & Physiology II, 4 cr
This course provides instruction in anatomy and physiology of domestic animals. The course focus is on digestive, nervous and sensory, endocrine and urinary systems. Lab activities focus on structure identification and dissection of related body systems of domestic animals.

AGV-118 Animal Anatomy & Physiology I, 4 cr.
This course provides instruction in anatomy and physiology of domestic animals. The course focus is on skeletal, musculature, renal, ophthalmic, cardiac and respiratory systems. Lab activities focus on skeletal identification and dissection of related body systems of domestic animals.

AGV-119 Veterinary (Tech) Medical Terminology, 2 cr.
Introduction to word parts, directional terminology, and analysis of common veterinary terms.

AGV-140 Veterinary Pharmacology, 3 cr.
This course covers the study of drugs and other pharmaceuticals used in veterinary medicine. Emphasis will be on drug usage, client education, calculations, measurement, administration, inventory, and storage. This course will give a detailed outline of the technician’s role and responsibility in the pharmacy.

AGV-145 Animal Nutrition, 3 cr.
Animal Nutrition provides instruction regarding essential nutrients and the role of each in an animal's metabolism. Topics include basic clinical and therapeutic nutrition, pet food analysis, nutritional deficiencies, and toxins. Emphasis is on dogs and cats with an introduction to large animal nutrition, feeds and feeding.

AGV-150 Office Procedures for Veterinary Technicians 3 cr.
Includes an overview of veterinary practice management and office procedures, with basic filing, record-keeping, telephone etiquette, cash drawer management, and the economics of veterinary practice. Instruction on the use of veterinary practice management computer software is provided.

AGV-158 Veterinary Law & Ethics, 3 cr.
Discuss moral, ethical and legal principles applicable to veterinarians and their employees, breeders, kennel operators, pet groomers and other allied to the small animal industry. Considers state, local and federal regulations relating to the industry. Effective client relations and telephone courtesy skills are also stressed.

AGV-161 Animal Nursing I, 3 cr.
The first of three courses to introduce and practice the fundamentals of animal nursing. Includes animal handling and restraint, patient admission and history, preparation and administration of vaccines and medications, care of hospitalized patients, introduction to radiology, practice management, client relations and sanitation. Limited to Vet Tech students.
AGV-162 Animal Nursing II, 3 cr.
Continuation of Animal Nursing I. Covers foundation material in pre- and post-surgical care, surgical assisting, fluid therapy, dental prophylaxis, anesthesiology, clinical pharmacy and basic nursing skills. Clinic and hospital record keeping are covered with an introduction to practical radiology.

AGV-167 Veterinary Clinic Pathology I, 3 cr.
Introduction to veterinary clinical pathology with an emphasis on laboratory procedures commonly performed in private practice. Fecal analysis, basic urinalysis and basic hematology are covered. Proper care and maintenance of laboratory equipment is stressed.

AGV-168 Veterinary Clinic Pathology II, 3 cr.
Basic clinical pathology laboratory procedures including specimen collection and preservation, hematology, and fecal exam preparation. Hematology will include preparation and performance of PCV, Hb, WBC, RBC counts, preparation and staining blood smears, and performance of differential cell counts. Limited to Vet Tech students.

AGV-174 Small Animal Clinic Observation, 1 cr.
Preparation for and observation at a veterinary practice to focus on small animals, including cats, dogs and other species as available.

AGV-177 Animal Nursing III, 4 cr.
Continuation of Animal Nursing II. Emphasis is on record keeping, emergency care, anesthesiology, radiology, dentistry, and surgical assistance.

AGV-181 Large Animal Clinic Observation, 1 cr.
Preparation for and observation at a veterinary practice to focus on large animals, including cattle, horses, sheep and swine.

AGV-183 Large Animal Clinic Observation, 2 cr.
Preparation for and observation at a veterinary practice to focus on large animals, including cattle, horses, sheep and swine.

AGV-187 Veterinary (Tech) Computer Apps, 3 cr.
This course re-introduces the student to computer software commonly used in veterinary practice. Students will become proficient in the use of Microsoft Office software and software used in the routine management of veterinary records.

AGV-188 Veterinary Clinic Pathology III, 4 cr.
Refinement of hematology and other skills acquired in Veterinary Clinical Pathology II. Additional units include urinalysis, electrocardiography, necropsy, cytology, parasitology and specialized clinical procedures.

AGV-189 Small Animal Clinic Observation, 2 cr.
Preparation for and observation at a veterinary practice to focus on small animals, including cats, dogs and other species as available.

AGV-267 Dosage Calculations for Veterinary Technicians, 1 cr.
Dosage Calculations emphasizes the basic math skills and dosage calculations required of Veterinary Technicians. Includes pharmaceutical mathematics with an emphasis on dosage calculations and fluid therapy as related to veterinary medicine.

AGV-932 Internship 4 cr.
This course requires an employment experience at a veterinary practice or clinic of at least 320 contact hours. A training sponsor at the employment site will provide supervision, in cooperation with the college instructor. Students will gain hands-on experience and demonstrate knowledge and skills developed in the classroom.

Anthropology

ANT-100 Introduction to Anthropology, 3 cr.
In this course we will work to make true statements about all human beings who have ever lived, all human beings who live today, and all human beings who will ever live, even to the point of not being human. This will be an introductory survey of the field of Cultural Anthropology from the cultural materialist theoretical perspective.

ANT-105 Cultural Anthropology, 3 cr.
This course covers the similarities and differences in human societies, from hunting and gathering to industrialized societies. Specific subjects covered include worldview, culture, language, economic systems, marriage, family, and kinship, gender, legal and political structures, religion, and more.

Art

ART-101 Art Appreciation, 3 cr.
Introduces art as a visual language, along with the methods and materials used. A brief art survey is also included, with the intent of helping the student become more informed about the visual arts.

ART-121 2-D Design, 4 cr.
This foundation course focuses on the general knowledge and essential skills used in creating two dimensional designs. Fundamental design concepts including the use of the elements and principles of design, along with color theory, are introduced through a variety of hands-on-experiences.

ART-124 Computer Art, 3 cr.
A studio-oriented course designed to use the computer as a tool for creating two-dimensional imagery. Technology is now used daily in the world of art including fine arts, graphic arts, and more. Ideally, the student should have access to the all or some of the following programs and peripherals: Microsoft Word, Microsoft Paint, a digital camera or scanner. Other items that could be utilized: Adobe Photoshop, Adobe PageMaker, Adobe Illustrator, printer, and other software appropriate for art and graphic design. In addition, the student should feel comfortable sending images and files via email and the internet.

ART-127 Digital Illustration, 3 cr.
Introductory course using electronic media as applied to specific problems in illustration, with an emphasis on preparing images for output.

ART-133 Drawing, 3 cr.
For the beginning drawing student. A variety of approaches and techniques will be used to develop and/or enhance the student's drawing skills. Exploration and experimentation with alternative drawing materials and methods will be strongly encouraged and supported.

ART-134 Drawing II, 3 cr.
Continuation and elaboration of ART-133. Prerequisite: ART-133.

ART-143 Painting, 3 cr.
The fundamentals of painting. A variety of painting media will be used, including oil, watercolor and acrylic. Diverse subject matter and approaches to painting will also be explored.
ART-144 Painting II, 3 cr.
Continuation of ART-143 with emphasis on a more personal approach regarding technique and imagery. Prerequisite: ART-143.

ART-173 Ceramics, 3 cr.
A studio class providing exploratory experiences in forming, firing, and decorating clay.

ART-174 Ceramics II, 3 cr.
Continuation of Ceramics I with an emphasis on the development of a personal approach to form. Prerequisite: ART-173.

ART-286 Photography: Portraiture, 3 cr.
Introduction to the art of portrait photography. Prerequisite: JOU-173

ART-928 Independent Study, 1 cr.
Instructor guided independent experiences in art.

Automotive Technology

AUT-186 Engine Repair Lab, 3 cr.
The hands-on learning activities related to the operation, diagnosis, and repair procedures of the modern automotive braking system. Areas included will be: mechanical, hydraulic, and electrical subdivision.

AUT-184 Brakes Lab, 3 cr.
The hands-on learning activities related to the operation, diagnosis, and repair procedures of the modern automotive braking system. Areas included will be: mechanical, hydraulic, and electrical subdivision.

AUT-186 Engine Repair Lab, 3 cr.
Hands on activities providing the student with fundamental concepts of operation, diagnosis, and repair procedures of the modern automotive internal combustion engine.

AUT-212 Automatic Transmissions/Transaxles Theory, 4 cr.
Principles of operation of torque converters, planetary gears, multiple disc clutches, one-way clutches, servos, accumulators and hydraulics.

AUT-213 Automatic Transmissions/Transaxles Lab, 3 cr.
Automatic Transmissions is a study of the basic knowledge and skills a student should possess when working on the modern automatic transmission or transaxle.

AUT-260 Manual Transmission Theory, 3 cr.
Manual Transmission is a study of the theory of operation, diagnostic principles, and repair procedures used in accordance with the modern automotive manual transmission transaxle, and drive train systems.

AUT-313 Auto Manual Dr Train/Axle Lab, 3 cr.
Hands-on class shows operation and proper repair procedures of current manual transmissions/transaxles, differentials and drive axles used in late model vehicles.

AUT-412 Automotive Suspension/Steering Theory, 3 cr.
Provides instruction design, operating principles, service, and alignment procedures of the automotive and light truck steering and suspension systems.

AUT-413 Auto Suspension/Steering Lab, 3 cr.
Covers operation and service of power and manual steering gears, rack and pinion systems, and suspension systems; practices method of four wheel alignment checks and front-end alignment.

AUT-510 Brakes Theory, 2 cr.
The theory of operation, diagnosis, and repair procedures related to the modern automotive braking system. Areas of instruction will include: mechanical, hydraulic, and electrical subsystems.

AUT-512 Auto Brake Systems Theory, 5 cr.
Basic principles of brakes, the hydraulic system, disc and drum brakes, parking brakes and power assist units. Emphasis on operation, diagnosis and repair of various braking systems.

AUT-513 Auto Brake Systems Lab, 4 cr.
A lab experience which will allow the student to acquire competencies in brake diagnosis and repair procedures.

AUT-624 Automotive Elect Systems Lab, 5 cr.
A lab experience that will provide the student with the opportunity to perform diagnosis, repair, and adjustment of automotive chassis electrical systems. Skills acquired in previous labs may be revised.

AUT-630 Automotive Electrical Systems, 5 cr.
Basic electricity as it pertains to the automotive chassis electrical systems. The operation, construction, and repair of charging and starting systems will be covered. Electrical components as they apply to the safety and driver convenience systems of the auto will be studied and service repair procedures investigated.
AUV-703  Automotive Heating & Air Conditioning, 3 cr.
The theory of operation, diagnosis and repair of automotive air conditioning and heating systems. Lab experience will provide the student with the opportunity to acquire the competencies required for successful automotive air conditioning and heater maintenance.

AUV-704  Auto Heating & Air Conditioning, 4 cr.
This is a study in the theory and hands-on learning activities related to operation, diagnostics and repair procedures of the modern HVAC systems used in the automotive industry.

AUT-827  Auto Ignition Systems, 4 cr.
Operation, diagnosis and repair procedures used to service the modern automotive ignition system.

AUT-834  Auto Fuel Systems, 4 cr.
Diagnostic and repair procedures used to service the automotive fuel system from the fuel tank to the fuel injector.

AUT-842  Auto Computerized Eng Controls, 4 cr.
Theory of operation, diagnosis and repair procedures for electronic engine control systems used by the automotive industry.

AUT-851  Auto Eng Performance Diagnosis, 3 cr.
Performance Diagnosis is designed to be an applied critical thinking class. By showing them techniques to gather diagnostic information through customer interviews and technical routines they have the opportunity to develop the skills necessary to formulate rapid and accurate diagnoses of automatic drivability problems.

AUT-890  Automotive Technology OJT, 4 cr.
Automotive Technology OJT is designed to provide the student with the real work learning activities necessary to acquaint them with the function of the modern automotive technician and the skills demanded of them.

Aviation

AVI-112  Sport Pilot Ground School, 3 cr.
The classroom ground school instruction in the fundamentals of aerodynamics, flight environments, aircraft systems, aircraft performance, weather, FAA regulations and the primary forms of navigation required to take the FAA Sport Pilot written exam.

AVI-113  Sport Pilot Flight Lab, 2 cr.
The flight instruction required in the fundamentals of aerodynamics, flight environments, aircraft systems, aircraft performance, weather, FAA regulations and the primary forms of navigation to become a Sport pilot.

AVI-129  Employ Prep Aviation Careers, 1 cr.
Teaches students how to prepare an aviation-type resume, cover letter, and how to handle an aviation job interview.

AVI-140  Private Pilot Ground School, 4 cr.
The classroom ground school instruction in the fundamentals of aerodynamics, flight environments, aircraft systems, aircraft performance, weather, FAA regulations and the primary forms of navigation necessary to take the FAA Private pilot exam.

AVI-180  Private Pilot Flight Lab I, 3 cr.
This Lab provides the flight time required to reach the experience and skill level needed in the fundamentals of aerodynamics, flight environments, aircraft systems, aircraft performance, weather, FAA regulations and the primary forms of navigation in order to take the Private Pilot practical test.

AVI-212  Instrument Ground School, 4 cr.
Classroom ground school instruction in instrument procedures and operations. Topics include; instrument approach procedures, advanced weather analysis and weather services, air traffic control procedures, FAA regulations and airspace use, and advance radio navigation procedures and en route procedures.

AVI-245  Commercial/Instrument Cross Ctry. Ft. Lab, 3 cr.
Flight training, on cross country flying procedures, advanced weather analysis and weather services, air traffic control procedures, FAA regulations and airspace, advance radio navigation procedures and en route procedures, complex aircraft and Commercial Pilot maneuvers.

AVI 246  Commercial/Instrument Flight Lab, 3 cr.
Flight training on instrument approach procedures, advanced weather analysis and weather services, air traffic control procedures, FAA regulations and airspace, advance radio navigation procedures and en-route procedures, in preparation for the practical test for the Instrument rating.

AVI 261  Commercial Pilot Ground School, 3 cr.
Classroom ground school instruction advanced aircraft systems and aerodynamics, weather and weather services, aircraft performance, weight and balance, FAA regulations and airspace use, and introduction to multi-engine operations and theory.

AVI 300  Flight Instrument Ground School, 3 cr.
Flight Instructor ground school will increase a student’s overall knowledge and prepare him/her to take the FAA Flight Instructor written tests and practical test for a Flight Instructor Certificate.

AVI 301  Instrument Instructor, 1 cr.
Flight and ground instruction in attitude instrument flying, instrument navigation, instrument approach procedures, ATC procedures, instrument en-route procedures and emergency procedures from the right seat.

AVI 350  Flight Instructor Flight Lab, 3 cr.
Ground instruction in the fundamentals of instruction plus flight instruction in methods and procedures for flying an aircraft from the right seat. Includes training in all private pilot flight maneuvers, commercial pilot flight maneuvers, and spin training

AVI-400  Multi-Engine Rating, 1 cr.
The student builds flight time and gains Pilot in Command experience in multi-engine aircraft.

AVI-405  Multi-Engine Rating, 3 cr.
Ground and flight instruction to prepare the student for transition to multi-engine aircraft. The student will take the FAA flight test at completion of the course. Prerequisites Instr. Commercial Single Engine Pilot Certification. (Formerly AV-206A)

AVI-928  Aircraft Transition Training, 1 cr.
Advanced Flight training in Complex, High Performance, Multi-Engine, or Tail-wheel aircraft.

AVI-941  Practicum, 1 cr., 3 cr., 5 cr.
Student is placed in an employment site, usually as a flight instructor, linemen, or mechanics helper. The employer trains the student and evaluates his/her performance on the job and points out strong areas and areas where improvement is required. This course is repeatable for credit up to a maximum of five credits.
Business Computer Applications

BCA-134 Word Processing, 3 cr.
The essentials of word processing and the use of text-editing equipment.

BCA-152 Comprehensive Spreadsheets, 3 cr.
Provides the student with hands-on training in the use of popular spreadsheet software.

BCA-185 Beginning Webpage Development, 3 cr.
Introduces web page construction theory along with practical applications. Content includes basic terminology. HTML language and the planning and construction of the student's own web page.

BCA-212 Intro to Comp Business Apps, 3 cr.
Introduction to the field of microcomputers and their components. Includes hands-on training in the use of Windows operating system, word processing, database, spreadsheet and graphic programs. No prior computer knowledge is necessary.

BCA-218 Adv Microsoft Office Apps, 3 cr.
Intermediate and advanced software applications utilizing the most recent Microsoft Office Suite (Word, Excel, Access, and PowerPoint) to create documents, worksheets, databases, and presentations suitable for course work, professional purposes, and personal use. Prerequisite: CSC-110

Biology

BIO-105 Introductory Biology, 4 cr.
Introduction to all biology, ecology, physiology, and biological principles. Intended for non-science majors. Lecture and laboratory.

BIO-112 General Biology I, 4 cr.
Introduction to biology concepts with emphasis on ecology, cellular biology, reproduction and development, genetics and evolution. Lecture and laboratory.

BIO-113 General Biology II, 4 cr.
Introduction to biology concepts with emphasis on kingdoms; taxonomy and a survey of invertebrate and vertebrate organisms; plant structures and physiology; and animal systems. Lecture and laboratory. Prerequisite: BIO-112.

BIO-141 Ecology & Environment Concepts, 4 cr.
Basic ecology and environmental concepts, including population studies of the world and how they relate to environmental problems. Lecture and laboratory.

BIO-151 Nutrition, 3 cr.
Normal Nutrition provides the student with a basic background of the nutrients which are essential in maintaining the physical and mental well-being of the human body. An overview of the digestive processes and the relationship to each group of nutrients is presented. Basic nutritional principles of food selection are studied with an emphasis on health promotion throughout the life cycle. Students examine their personal eating habits and identify ways to promote a healthy nutritional status.

BIO-163 Essentials of Anatomy & Physiology, 4 cr.
Structure and function of the human body with emphasis on cells, tissues and all major organ systems. Anatomy and physiology are integrated at the cellular level and at the organ/system level. Lecture and laboratory.

BIO-168 Human Anatomy & Physiology I, 4 cr.
An advanced study of anatomy and physiology. The relationship between body structure and function and homeostasis forms the basis for the course. Pathological processes that result in dysfunction and disease are presented. Major topics include cell biology, histology, skin, skeletal, muscular, and nervous systems. Lecture and laboratory.

BIO-173 Human Anatomy & Physiology II, 4 cr.
An advanced study of anatomy and physiology. The relationship between body structure and function and homeostasis forms the basis for the course. Pathological processes that result in dysfunction and disease are presented. Major topics include digestive, endocrine, cardiovascular, lymphatic, respiratory, immune, blood, metabolism, reproduction, urinary, fluid, electrolyte, and acid-base balance. Lecture and laboratory.

BIO-186 Microbiology, 4 cr.
General microbiology designed for the science major and nursing students. Emphasis on morphology, physiology, microbial genetics, immunology, pathology, epidemiology, and laboratory techniques. Lecture and laboratory. Prerequisite: BIO-102, BIO-105, BIO-163, BIO-168, AGV-104 or higher.

BIO-210 Concepts of Pathophysiology, 4 cr.
This course will provide an in-depth analysis of the changes that occur in the human body as a result of disease or injury. Pathophysiologic concepts and common alterations occurring in the body systems will be defined and discussed. Interrelationships between risk factors, clinical signs, disease processes and medical treatment of common alterations will be analyzed.

BIO-248 Introduction to Bioscience Technology, 4 cr.
This course explores the expanding field of biotechnology and the impacts on society. Fundamental biology, chemistry and math concepts are applied through hands-on activities to emphasize essential laboratory methods. Course content and lab skills are relevant to agriculture, medicine, bioenergy and biosafety.

BIO-300 Field Biology & Lab, 4 cr.
Basic field study of the various types of ecosystems common to the Iowa Great Lakes region. Identification of plants and animals which inhabit these ecosystems. Specimen collection techniques, use of taxonomic keys, using water quality analysis equipment and ecological field methods. Lecture and laboratory.

Business

BUS-102 Intro to Business, 3 cr.
The basic fundamentals of business. Basic business and economic concepts and terminology; management, marketing, finance, human resource management, accounting and other business areas.

BUS-106 Employment Strategy, 2 cr.
Students are exposed to areas of retailing through field trips and interaction with people currently in the retail business. The class will involve job seeking skills and include actual job search and interviewing experience.

BUS-110 Business Math and Calculators, 3 cr.
A study of the mathematics of business in its application to a variety of vocations including fundamental mathematical processes, fractions, price and cost, interest, bank discounts, cash and trade discounts, depreciation, payroll and taxes, and financial statements. Students will acquire the skills to use Microsoft Excel to perform each concept as well as using the traditional methods.
BUS-115 Business Correspondence, 2 cr.
Emphasis on correct grammar; punctuation and spelling as applicable to written business communications, letters, memo and reports. Special notice is given to the individual student's resume and letters of application.

BUS-121 Business Communications, 3 cr.
Communication skills necessary in the business world, including use of the telephone, interviews, job applications, listening skills and letter writing.

BUS-126 Business Principles, 3 cr.
Introduction to record keeping, financing, employee benefits and employer problems.

BUS-130 Intro to Entrepreneurship, 3 cr.
This course emphasizes these processes: understanding how to find, analyze and pursue an opportunity; understanding oneself and personality characteristics of the "entrepreneur," examining the environment for entrepreneurship. A case and experiential approach is used.

BUS-150 E-Commerce, 3 cr.
Students are introduced to the basic elements of electronic commerce as a market where commercial activities are conducted. It will focus on business concepts and how to apply technology in order to be successful. Topics include market trends, globalizing a company, vendor solutions, storefronts, advertising, resource requirements, and operational issues of launching a commercial presence in today’s global electronic marketplace.

BUS-160 Human Relations, 2 cr.
Students are given the opportunity to apply human relations concepts and evaluate experience and observations. Social skills required in various occupational settings will be developed, emphasizing how appropriate personal attitudes lead to social and business success.

BUS-161 Human Relations, 3 cr.
Students are given the opportunity to apply human relations concepts and evaluate experience and observations. Social skills required in various occupational settings will be developed, emphasizing how appropriate personal attitudes lead to social and business success.

BUS-175 Business Seminar I, 1 cr.
Introduces the Small Business Management program, career opportunities in the business world and includes an orientation to the business internship.

BUS-183 Business Law, 3 cr.
Introduction to the development of law in our society — the legal rights and social forces of government, business, society and contracts. Presented under the legal framework of the Uniform Commercial Code.

BUS-185 Business Law I, 3 cr.
Business Law 1 is an introduction to Business Law in the areas of legal environment of business, contract law, contracts for the sale of goods (UCC) and real and personal property law.

BUS-186 Business Law II, 3 cr.
A continuation of BUS-183 in the area of sales, principal agent relationships, commercial paper, creditor rights, and secured transactions, real property, and bailments, as time permits.

BUS-197 Leadership Development, 3 cr.
This course explores leadership styles effective in the workplace and helps participants gain insight into their natural leadership style and implications of that style on work and group performance.

BUS-211 Business Statistics, 4 cr.
The use of statistics by the methods of descriptive and inferential statistics. Both single and bivariate data are analyzed. Elementary probability and normal probability distributions are studied along with hypothesis testing linear correlation regression analysis and analysis of variance. Prerequisite: MAT-102 or 2 years of high school algebra.

BUS-212 Business Statistics II, 3 cr.
A continuation of BUS-211 or MAT-157. Application of statistics in a business context and use of computer software for statistics. Prerequisite: BUS-211 or MAT-157.

BUS-250 Principles of Real Estate, 3 cr.
Fundamental principles of real estate evaluation, brokerage, financing structure, construction and real estate law.

BUS-932 Internship, 3-5 cr.
On-the-job training, usually full time, in a small business or related enterprise.

BUS-938 Office On-The-Job Training, 5 cr.
Apprenticeship in office systems. Students will work as regular employees in offices supervised by staff members.

BUS-949 Special Topics, 3 cr.
Thirty-two students total from University of Iowa, University of Northern Iowa, Iowa State University, Buena Vista University, and Iowa Lakes will participate in advanced study of entrepreneurship that will include a team-based entrepreneurial venture computer simulation, seminars with successful entrepreneurs, business and community leaders, and networking and mentoring to enhance your understanding of entrepreneurship opportunities in Iowa.

Computer Aided Drafting (CAD)

CAD-119 Introduction to Computer Aided Drafting I, 3 cr.
An introduction to the graphic language, the equipment, the hardware, and the basic techniques used to create technical drawings. CAD workstations will be used to create basic entities and teach technical drawing techniques.

CAD-121 Computer Aided Drafting II, 3 cr.
Instruction of technical drawing techniques will continue on CAD stations. The 3D dimension CAD will be surveyed, but emphasis will be placed on 2D drawing communication. Creation of multiview projections, sectional views, auxiliary views, revolutions, dimensions and tolerances will be practiced.

Chemistry

CHM-151 College Chemistry I, 4 cr.
The first of two general survey courses introducing the student to general, organic and biological chemistry. Topics covered are chemical calculations, atomic structure, nuclear chemistry, periodic relations, gas laws, solid state, solutions, and acids and bases. Lecture and laboratory.

CHM-152 College Chemistry II, 4 cr.
Continuation of CHM-151. Covers kinetics and equilibrium of chemical reactions as well as acid-base theory. Hydrocarbon naming and reactions are also covered, including alcohols, carbohydrates, amines, acids, acid derivatives, lipids, amino acids, nucleic acids and proteins, SNA, RNA and metabolism. Lecture and laboratory. Prerequisite: CHM-151.
CHM-166 General Chemistry I, 5 cr.
The properties of matter in terms of modern chemical principles. The topics covered are measurements, stoichiometry, atomic structure, chemical reactions, periodic relationships, gas laws, thermochemistry, quantum theory, solutions and equilibrium and inter-and intra-molecular forces. Problem solving in each of the areas is included. Lecture and laboratory. Prerequisite: High school chemistry and mathematics.

CHM-176 General Chemistry II, 5 cr.
Acids and bases, oxidation/reduction, solubility products, and nuclear chemistry, kinetics, equilibrium, thermodynamics, electrochemistry, coordination complexes, qualitative analysis, and an introduction to organic chemistry. Problem solving in each of the areas is included. Includes microscale and semi-microscale lab. Prerequisite: CHM-166

CHM-190 Intro to Forensic Chemistry, 4 cr.
This course covers the basics of chemistry as it relates to the forensic lab. In the course we will cover the basics of evidence collection, clues at the atomic level, and the basics of chemical evidence including DNA evidence. Also covered will be the use of chemistry in explosives, arson investigations, poisoning, and estimating time of death of a victim. Lecture and laboratory.

CHM-263 Organic Chemistry I, 5 cr.
This is part of a yearlong rigorous survey of Organic Chemistry. Modern Organic Chemistry, including nomenclature, synthesis, structure, bonding, mechanisms and carbon and its compounds. This course is for students majoring in pre-medicine, pre-veterinary medicine, chemistry, biological sciences, and for anyone planning to take further courses in chemistry. Lecture and Laboratory. Prerequisite: CHM-166

CHM-273 Organic Chemistry II, 5 cr.
Continuation of CHM-263. This is part of a yearlong rigorous survey of Organic Chemistry. Classes of organic compounds studied will be aldehydes, ketones, acids and acid derivatives, amines and nitrogen derived compounds. Aromatic compounds, reactions, mechanisms, carbohydrates, nucleic acids, and proteins are covered. Lecture and laboratory.

Computer Programming

CIS-125 Intro to Programming Logic W/Language, 3 cr.
Studies the most commonly used structured techniques of flowcharting included with the concept of data flow in large integrated systems. Also included are systems design, systems analysis and systems development for data processing solutions.

CIS-141 Computer Science, 3 cr.
Introduction to the concepts of computer programming presenting modern structured design and techniques using Visual Basic 6.0 programming language.

CIS-146 Introduction to Video Game Development, 3 cr.
This course will introduce students to all aspects of the game development process. The course will begin with a brief history of the gaming industry and then delve into the specific design phases. Emphasis will be placed on the development of the design document and evaluating real world examples. Character design and storyboarding will be discussed as well as gaming genres and gaming consoles.

CIS-147 3D Level Design for Games, 3 cr.
This course will give students a hands on, example based introduction to the level design process for use in 3D games. Students will learn to use industry standard design programs and will understand basic lighting, texturing, NPC (non player character) and object placement as well as level layout concepts. Students will critique professional and peer designed levels through play testing and critical analysis.

CIS-148 3D Modeling and Character Animation, 3 cr.
This course will give students a hands on, example based introduction to modeling and animation process for use in 3D games.

CIS-161 C++, 3 cr.
Structured language which is powerful, efficient and versatile. The student can write programs from very simple applications to advanced editors, operating systems and sophisticated application programs.

CIS-162 C++, 4 cr.
This course introduces the general characteristics of C++. Students will learn to write code, execute, debug, explore the immense documentation and implement strategies. Prerequisite: Fundamentals of programming using Basic.

CIS-166 C++ for Game Developers, 3 cr.
The goal of this course is to give students advanced exposure to the C++ programming language as it pertains to game development. C++ is considered the standard language in the field and this course will provide hands-on examples coupled with theory that applies directly to gaming. Topics covered include basic programming constructs, object oriented programming, references and pointers, the standard template library, functions, and dynamic memory allocation. Advanced concepts include data structures and algorithms directly relevant to game programming. Prerequisite: CIS-125

CIS-171 Java, 3 cr.
Introduces basic Java language concepts by building applications and applets. Students will build graphic user interfaces using the Abstract Windowing Toolkit. Advanced Java concepts will be discussed. Prerequisites: CIS-141 and CIS-125.

CIS-204 Web Programming I, 3 cr.
This course will give students the opportunity to explore web development concepts without the aid of design products like Adobe Dreamweaver. This course will begin with a brief history of the technological constructs of the Internet followed by an in depth, hands on approach to XHTML, CSS along with basic JavaScript. Concepts will include XHTML Documents Type Descriptions, basic formatting, hyperlinks, handling graphics and XHTML events, and various XHTML tags. JavaScript concepts will include: The Document Object Model, variables, statements, loops, decisions and program logic. Students will be exposed to the new tags and properties of HTML5 and CSS3.

CIS-332 Data Base and SQL, 3 cr.
To provide students with a foundation in the design, implementation and management of database systems. A vast array of new terminology will be introduced and an illustration of the physical and logical representation of data will be presented through the use of theory and practice. The concepts of Data Modeling, Normalization and the SQL language will be explored in depth followed by actual implementation in case studies and class projects. We will also discuss the role of database technology in modern industry. Microsoft Access will be the database management system used to apply the concepts in and outside of class.

CIS-366 Game Development I, 3 cr.
This course exposes students to 2-dimensional game development concepts using the Torque2D game engine. Students will learn concepts related to 2d game development and then apply
what they learn to a variety of scenarios through examples and tutorials. The culmination of this course involves creating a fully functional 2D game. Topics include: introduction to the Torque2D software, level editing, sprites (animated and static), networking, behaviors, scripting, basic physics, GUI development, and sound. Prerequisite: CIS-125

CIS-367 Game Development II, 3 cr.
In this course, students will create a completed 3-dimensional game using the Torque Game Engine. Concepts presented include: world editing/terrain building, importing external assets relating to rigid structures, items, health packs, NPCs, etc..., using audio, advanced TorqueScript, networking, datablocks, and GUIs. Prerequisite: CIS-366

CIS-612 Advanced Visual Basic, 3 cr.
This course expands upon concepts of computer programming knowledge gained from Computer Science I (CIS-141), presenting modern structured design and techniques using Visual BASIC 2005 programming language, as well as gaining some insight to industry database programming with a brief introduction to Object Orientated Programming.

CIS-941 Computer Science Practicum, 3 cr., 5 cr.
Students will gain practical experience at individual work stations and will be required to report on their field experience. Evaluations will be based on their on-site performance.

**Communication**

COM-723 Workplace Communications, 3 cr.
Developing skills in reading, writing and listening as they apply to students’ vocational needs.

COM-725 Workplace Communications, 2 cr.
Refining skills in reading, writing and listening as they apply to the student’s vocational needs.

COM-753 Technical Communications, 3 cr.
This course is designed to prepare students for the oral and written communication situations in the working world. The major areas of study include technical communication principles, oral communications, composing technical documents, and using Standard English. Writing projects require the use of a word processing program; therefore, computer experience is recommended.

COM-781 Written Communication in Workplace, 3 cr.
This course focuses on composition and editing of curriculum-specific technical and business-related writing projects. Instruction includes formatting, information gathering, document drafting, editing, and written employment strategies.

**Construction**

CON-106 Construction Welding, 1 cr.
Welding techniques applicable to the construction trade.

CON-113 Construction Print Reading, 2 cr.
Studies the builders’ visual language and communication.

CON-120 Construction Estimating, 1 cr.
Estimating techniques used at the lumber desk at a retail establishment.

CON-125 Construction Estimating II, 3 cr.
Construction Estimation II is an extension of the concepts learned in the first year in Construction Estimation. Processes learned in the first year class will be implemented and put into practice. Industry professionals will present different methods they use along with computerized estimation programs. Students will develop different estimation sheets for a specific task and implement into practice.

CON-137 Foundations and Concrete, 7 cr.
Covers structure foundations, concrete and concrete block construction. Lecture and laboratory.

CON-158 Carpentry Level III, 5 cr.
Carpentry Level Three is the third in the Contra series of The National Certified Carpentry program. It includes lecture and lab including exterior roof, moisture protection, stairs, metal studs, drywall, suspended ceilings, different trim applications, and cabinetry.

CON-195 Foundations and Concrete, 5 cr.
This course is designed to have the student work with site prep, plan and on-site building layout, and foundation work along with basement bearing partitions. Also included will be interior and exterior concrete. The student will study slab-on-grade foundations, poured and block foundations, and permanent pressure-treated foundations. Estimating foundation and concrete materials will be covered.

CON-196 Fundamentals of Building with Structural Insulated Panels, 1 cr.
This course provides detailed training on structural insulated panels (SIPs). It covers every aspect from design to installation to selling SIPs, and provides not only the “how-to” but the “why it works.”

CON-201 Framing Techniques and Lab I, 2 cr.
Basic framing techniques with emphasis on identification and application. Lecture and laboratory.

CON-202 Framing Techniques and Lab II, 5 cr.
This course covers the framing of a structure including floor systems, exterior and interior bearing/nonbearing walls, stairways, roof systems, exterior fascia and soffit framing along with exterior sheathing.

CON-217 Exterior Finishing, 3 cr.
Exterior finish work on residential and commercial structures. Lecture and laboratory.

CON-218 Framing Techniques and Lab II, 4 cr.
This course covers the framing of a structure including floor systems, exterior and interior bearing/nonbearing walls, stairways, roof systems, exterior fascia and soffit framing along with exterior sheathing.

CON-225 Techniques of Exterior Covering, 6 cr.
Studies exterior cover materials for residential and commercial structures. Lecture and laboratory.

CON-228 Methods of Interior Finishing, 3 cr.
Covers interior finishing material and its installation in residential and commercial structures. Lecture and laboratory.

CON-229 Install of Interior Finishing, 3 cr.
Covers interior wall coverings and their application as well as thermal and sound insulation. Lecture and laboratory.

CON-238 Techniques of Exterior Covering, 4 cr.
This course is a study of the products used in the exterior covering of a residential project including various types and styles of roofing materials, siding and exterior wall coverings, soffit and fascia materials, flashings, trim and moldings, exterior fasteners, caulks and sealants, and paints and preservations.
Con-300 Optimum Value Engineering - Adv. Framing, 1 cr.
This course describes and explains advanced framing techniques that are used in high energy efficient framing in residential housing. Students will explore and apply ways to frame and finish framing systems that save energy but using proven techniques. Students will also go to current building projects and critique framing methods being used on site.

Con-314 Sustainable Building Practices and Design, 1 cr.
Covers the sustainable building practices and alternative energy generation methods including residential and recycling processes. This course follows the ten unit curriculum from the Center on Sustainable Communities.

Con-326 High Energy Efficiency Construction, 4 cr.
This course covers the framing of a structure including floor systems, exterior and interior bearing/non bearing walls, stairways, roof systems, exterior fascia and soffit framing along with exterior sheathing.

Con-329 Construction Management, 3 cr.
The Construction Jobsite Management student will be introduced to various styles of construction jobsite management through real life jobs with industry representatives and first year Construction Technology student's projects. Students will learn about the project team, use of documents on the jobsite, submittals, shop drawings, jobsite layout, meeting control, safety management, changes and claims forms, documents and project closeout record keeping.

Con-351 Computer Generated Blueprint and Design, 3 cr.
This course is an overview of basic computer aided residential construction drafting and design. It explores concepts, issues and methods in computer-aided design. Emphasis is placed on the creation of two-dimensional as well as three-dimensional models using the design program.

Con-431 Construction Internship I, 6 cr.
On-the-job training to gain experience in the student's field of interest.

Con-932 Internship, 3 cr.
The Construction Internship II provides on the job training for area of student interest. This course will have a manager's or supervisor's emphasis with job shadowing and leadership skills the main focus. Students will be required to document their time and discuss with instructor during scheduled meetings.

Criminal Justice

Crj-100 Intro to Criminal Justice, 3 cr.
Survey of the American criminal justice system, the early, middle and late stages of the criminal justice system are analyzed within the framework of law and research.

Crj-101 Ethics in Criminal Justice, 3 cr.
Through study of various models of ethics, students will learn how to evaluate difficult moral and ethical decisions they are likely to face as a practitioner in the law enforcement or corrections field.

Crj-110 Patrol Procedures, 3 cr.
Broad examination of the various structures and functions of American Law Enforcement agencies and their functional units. The exploration of police procedures revolves around the topics of discretion, effectiveness and efficiency, and constitutional limits.

Crj-120 Intro to Corrections, 3 cr.
Survey of correctional theory and practice including such topics as: historical foundations of contemporary corrections, applied theory, evaluation research, sentencing and crime prevention.

Crj-123 Service Learning Project, 1 cr.
This course provides the student with the opportunity to become engaged in a community service project.

Crj-130 Criminal Law, 3 cr.
This course examines the elements of criminal law. Including the categories of crime by type, defenses, and individuals involved. The course also includes the historical development of criminal law. Prerequisite: CRJ-100

Crj-131 Criminal Law and Procedure, 3 cr.
Examination of the more common crimes, criminal defenses and the procedures used to process a criminal case from arrest to final disposition.

Crj-133 Constitutional Criminal Procedure, 3 cr.
This course examines the protections afforded to individuals by the US Constitution. Specific areas addressed include initial contact with law enforcement and continues through post-conviction relief. Students should gain an understanding of criminal procedures through statutory and precedent case review. Prerequisite: CRJ-100 and CRJ-130

Crj-136 Correctional Law, 3 cr.
Examines the law in the correctional setting with obligations of correctional workers. Prerequisite: CRJ-120

Crj-141 Criminal Investigation, 3 cr.
Covers fundamentals of investigation including interviewing and interrogating; collecting and preserving evidence; modus operandi; crime scene search; etc.

Crj-170 Overview of Cybercrime, 3 cr.
This course identifies and discusses the nature of the successful cyber-crime investigation and the proper preparation for trial. Students will have a better understanding of current technology used in these crimes.

Crj-200 Criminology, 3 cr.
Scientific study of the nature and causes of criminal behavior and social deviance.

Crj-201 Juvenile Delinquency, 3 cr.
Juvenile justice system is examined from historical constitutional and operational perspectives. Theories concerning juvenile delinquency are explored.

Crj-207 Drug Use and Abuse, 3 cr.
Designed to help the student understand sociological aspects of drug use, abuse and treatment.

Crj-208 Introduction to Private Security, 3 cr.
This course will introduce the student to the private security profession in America and current trends in the industry.

Crj-214 Survival Spanish for Criminal Justice, 2 cr.
This program is designed to provide non-Spanish-speaking criminal justice students and police officers with functional skills in Spanish. Spanish phrases, commands, and questions practical to daily police and corrections work are covered. No prior knowledge of Spanish necessary.

Crj-218 Field Experience I, 2 cr.
Course designed to provide students with on-the-job experience in a law enforcement agency of their choice. The student will also learn the requirements of the law enforcement profession. Prerequisite: CRJ-100
CRJ-219 Field Experience II, 3 cr.
Continuation of CRJ-218. Prerequisite: CRJ-218, completed 9 credits of Criminal Justice courses obtaining a 2.5 GPA in Criminal Justice courses and a 2.0 Cumulative GPA.

CRJ-220 Community-Based Corrections, 3 cr.
Presents the theoretical and philosophical basis of probation, parole and other community based correctional programs.

CRJ-250 Firearms, 1 cr.
Introduction to police firearms safety and care; use of deadly force; chemical agents; firing range safety; latest techniques of combat shooting; and recreational shooting.

CRJ-900 CJ with the Expert, 1 cr.
Supplemental enrichment course related to Criminal Justice which may include special projects or papers.

CRJ-901 CJ in the Big City, 1 cr.
Supplemental enrichment course related to Criminal Justice which includes special projects; projects may include tours, Ride-Along, question and answer sessions with professionals and others affected by the criminal justice field.

CRJ-920 Field Experience, 5 cr.
Course for students who wish to take all their experience at one time.

Collision Repair & Refinish

CRR-203 Plastic Repairs Theory, 2 cr.
Students receive instruction and perform all types of plastic and adhesive repair as well as SMC repair. Course is achieved through industry demos, and hands on plastic repairs.

CRR-302 Intro to Collision Repair, 2 cr.
Shop and tool safety, tool and equipment usage and career options in the collision repair industry are studied. Vehicle construction and components are introduced and environmental effects and proper safety, handling and disposal of hazardous materials used in collision repair are studied.

CRR-326 Sheet Metal Repair Theory, 3 cr.
Metalworking skills are emphasized as the foundation of properly repairing damaged metal panels, followed by an understanding of body fillers and shaping techniques. Damage theory is covered in addition to damage analysis and the different types of steel used in automotive construction. Introduction and paint gun use for conversion coatings and primer will be covered.

CRR-327 Sheet Metal Repair Lab, 2 cr.
Metalworking skills are performed by properly repairing damaged metal panels, followed by using body fillers and shaping techniques. Damage analysis and repairing steel panels used in automotive construction are worked with first hand. Introduction and paint gun use for applying conversion coatings and primer will also be covered.

CRR-351 Collision Lab I, 2 cr.
Students perform a real non-structural repair from beginning to end with direct supervision of the instructor.

CRR-352 Collision Repair Lab II, 2 cr.
Students repair vehicles in the lab based on actual estimates generated by the students. Skills are fine-tuned to sequence a repair plan while improving speed and working efficiently on a production basis. Prerequisite: CRR-351.

CRR-421 Non-Structural Repair Theory, 3 cr.
Panel replacement and alignment of doors, hoods, etc. are studied. Course also covers theories of door hardware, window systems, and exterior and interior trim replacement and repairs.

CRR-422 Non-Structural Repair Lab, 2 cr.
Panel replacement and alignment of doors, hoods, etc. are practiced. Door hardware, window systems, and exterior and interior trim replacement and repairs and performed on actual vehicles.

CRR-540 Structural Repair Theory, 3 cr.
The basic fundamentals of frame diagnosis and repair on conventional and unitized frames are taught. Also, the types of frame machines and safety are introduced, as well as collision theory. Structural integrity via stationary glass is covered along with its replacement. Includes replacement of structural panels, including both new and used parts. Sectioning techniques are introduced as well as a study in sideswipe, frontal, and rear damages as well as rollover damages.

CRR-541 Structural Repair Lab, 2 cr.
Frame diagnosis and repair on conventional and unitized frames are performed on vehicles. Frame machines, as well as structural integrity via stationary glass is covered along with its replacement. Includes replacement of structural panels including both new and used parts. Sectioning techniques are introduced as well as a study in sideswipe, frontal, and rear damages as well as rollover damages. All above work is performed on actual vehicles.

CRR-606 Mechanical Repairs Theory, 2 cr.
Accident damaged mechanical components are covered in this course. Basic repairs to electrical, suspension, steering, cooking and air conditioning systems are taught, beginning with diagnosis and an understanding of identification and system operations.

CRR-607 Mechanical Repairs Lab, 1 cr.
Basic repairs to electrical, suspension, steering, cooking and air conditioning systems are performed beginning with identification of damaged parts and replacement.

CRR-742 Estimating Theory, 2 cr.
Analyzing and learning to write a cost estimate using a computer as well as printed material. Knowledge of parts, manuals, nomenclature and flat rate charts is covered and shop management techniques are introduced.

CRR-749 Estimating Lab, 1 cr.
Practice in analyzing a job and writing an estimate using a computer as well as printed material. Shop management skills and professionalism are demonstrated. Co-requisite: CRR-742.

CRR-808 Introduction to Refinishing Theory, 1 cr.
Introduction to painting including surface preparation, safety, composition of paint, primers and sealers, application techniques and equipment.

CRR-809 Introduction to Refinishing Lab, 3 cr.
Practice in surface preparation, safety, application techniques for paints, primers and sealers. Masking skills and paint application are performed. Correcting paint imperfections is practiced along with application of decals and stripes. Co-requisite: CRR-808.

CRR-838 Refinishing II Theory, 2 cr.
Theory of adjusting tints for a color match, blending techniques, tri-coat finishes to achieve finishes on today’s vehicles. Color theory and techniques for applying pearls and metallics are studied.
CRR-839  Refinishing II Lab, 3 cr.
Practice in adjusting tints for a color match, blending and spraying tri-coat finishes and applying pearls, metallics and custom paints. Prerequisite: CRR-809. Co-requisite: CRR-838

CRR-908  Cooperative Education, 2 cr.
Job training in a collision repair facility performing assigned tasks. Prerequisite: first two semesters of program.

Computer Science
CSC-101  Computer Familiarization, 1 cr.
This course is designed to teach students basic computer skills. Emphasis will be a hands-on experience with basic software applications and file maintenance. Utilization of PowerPoint, internet skills and electronic data searches will also be included.

CSC-110  Intro to Computers, 3 cr.
Introduction to microcomputers and their components. Covers computer concepts and management information systems. Hands-on training includes the use of Windows, word processing, spreadsheet, graphics and database programs as applied to the solution of business problems.

Film and Theatre
DRA-101  Intro to Theatre, 3 cr.
Introduces drama as a separate literary form as approached historically from Greek drama to the present, including both classic and contemporary drama.

Disability Services
DSV-104  Making a Difference: Service Careers, 3 cr.
Introduction to the human services and helping professions. A basic overview of services available, recipient populations and issues related to helping others. Covers professionalism, teamwork and communication skills.

DSV-125  Behavior Management, 3 cr.
Students will develop the beginning skills of observing and managing the behavior of others individually or in groups. This course introduces students to beginning behavior teaching methods and situations. Teaches how-to skills, such as observing, recording, designing, implementing and evaluating behavior programs.

DSV-135  Assessment and Instruction, 3 cr.
This course introduces students to the value base of human services and helping professions. Address strategies and practices used in assessing and evaluating client needs, establishing and identifying resources and making appropriate referrals. Intake interviews and assessments are explored. Students will develop knowledge and basic skills in the area of programming and developing support services and community resources. Ethical issues are also addressed.

DSV-155  Services & Vocational Planning, 4 cr.
Focus is on available support services and vocational aspects of rehabilitation. Content includes identification of job tasks, occupational characteristics and job matching. Students gain understanding of the need for services and the referral process. Job analysis and labor market surveys are completed. Students will develop an appreciation of the psychosocial adjustment aspects of living with a disability. This course will cover both physical and mental disabilities and services available. Students will participate with Service Learning projects.

DSV-160  Counseling Skills, 4 cr.
This is an introductory course in applied counseling techniques. Students are introduced to a variety of facilitative skills and counseling concepts and work through the interviewing process in simulated helping services settings.

DSV-932  Internship Human Services/Disability, 2 cr., 3 cr.
Practical field experience in phases of operation and duties relating to human services, paraeducation, health or rehabilitation. Focus is program writing, data collection, documentation, job skills, and participant outcome.

DSV-941  Practicum, 3 cr., 4 cr., 6 cr.
Practical field experience in phases of operation and duties relating to human services, paraeducation, health or rehabilitation. Focus is program writing, data collection, documentation, job skills, and participant outcome.

Early Childhood Education
ECE-103  Intro to Early Childhood Ed, 3 cr.

ECE-106  Child Development Associate Standards, 1 cr.
Assists the eligible CDA credential candidate with developing and preparing for the Preschool, Infant-Toddler, or Family Child Care CDA validation visit and assessment. Prerequisite: ECE-133, ECE-103, ECE-243 with a 2.0 GPA. Obtain an Elidable CDA Advisor and meet CDA credential eligibility.

ECE-110  Early Childhood Professionals I, 1 cr.
Emphasizes problem solving skills and team building through a variety of group activities. Pre-requisite: Child Care program.

ECE-111  Early Childhood Professionals II, 1 cr.
Emphasizes human relations skills including communication, leadership, personal appearance, etiquette and job seeking skills. Prerequisite: ECE-110

ECE-112  Portfolio Development I, 1 cr.
Guides students' development of a professional early childhood education portfolio showcasing their knowledge, skills, and dispositions in alignment with the NAEYC Standards for Professional Preparation of Students at the Associate Degree Level. Prerequisite: Enrollment in Child Care or Early Childhood Education programs with at least 6 credits or previous completion of at least 6 ECE credits.

ECE-113  Portfolio Development II, 1 cr.
Guides students' completion and presentation of a professional early childhood education portfolio showcasing their knowledge, skills, and dispositions in alignment with the NAEYC Standards for Professional Preparation of Students at the Associate Degree Level. Prerequisite: ECE-112 Corequisite: To be taken the final semester of Early Childhood program.

ECE-133  Child Health, Safety, and Nutrition, 3 cr.
Focuses on current concepts in the fields of health, safety and nutrition and their relationship to the growth and development of the young child ages birth to eight. Blends current theory with practical applications and assessments. Includes the influences of families and diversity on health, safety, and nutrition in early childhood settings.

ECE-140  Early Childhood Curriculum Planning, 3 cr.
Examines and evaluates early childhood curriculum and methods leading to the development and implementation of appropriate curricula for young children. Prerequisite: Completion of Child Care Diploma Program.

**ECE-158 Early Childhood Curriculum I, 3 cr.**
Focuses on the development, implementation and assessment of appropriate environments and curricula for young children ages three through eight. Students prepare to utilize developmentally appropriate practices in a context of family and culturally sensitive care. Emphasis is on understanding children’s developmental stages and developing appropriate learning opportunities, interactions, and environments in the following areas: dramatic play, art, music, fine and gross motor play.

**ECE-159 Early Childhood Curriculum II, 3 cr.**
Focuses on the development, implementation and assessment of appropriate environments and curricula for young children ages three through eight. Students prepare to utilize developmentally appropriate practices in a context of family and culturally sensitive care. Emphasis is on understanding children’s developmental stages and developing appropriate learning opportunities, interactions, and environments in the following areas: emergent literacy, math, science, technology and social studies.

**ECE-170 Child Growth and Development, 3 cr.**
Reviews typical and atypical development of children from conception to adolescence in all developmental domains. Presents interactions between child, family and society within a variety of community and cultural contexts. Examines theories associated with our understanding of children.

**ECE-210 Early Childhood Prof III, 1 cr.**
Emphasizes problem solving skills and team building through a variety of group activities. Prerequisite: ECE-111.

**ECE-211 Early Childhood Prof IV, 1 cr.**
Emphasizes human relations skills including communication, leadership, personal appearance, etiquette and job seeking skills. Prerequisite: ECE-210.

**ECE-221 Infant/Toddler Care and Education, 3 cr.**
Focuses on care, education, and assessment of children from birth to thirty-six months. Prepares students to utilize developmentally appropriate practices including responsive caregiving, routines as curriculum, importance of relationships with diverse families, and a focus on the whole child in inclusive settings.

**ECE-243 Early Childhood Guidance, 3 cr.**
Focuses on effective approaches and positive guidance strategies for supporting the development of all children. Emphasizes supportive interactions and developmentally appropriate environments. Uses assessment to analyze and guide behaviors. Studies impact of families and diversity on child guidance.

**ECE-261 Contemporary Issues in Early Childhood Education, 3 cr.**
An in-depth study of current political, economic, social and cultural events and their impact on children and child care.

**ECE-262 Early Childhood Field Experience, 3 cr.**
Supervised experience in selected early childhood settings serving children ages birth through eight. Includes integration of theory, research, and reflective practice. Provides an understanding of developmentally appropriate practices and the developmental stages of diverse populations of young children and families. Emphasizes professional relationships and behavior, appropriate adult/child interactions, basic curriculum planning, and program routines. Prerequisites: ECE-158, ECE-159, ECE-170, ECE-243, ECE-221 with 2.0 Cumulative GPA and 2.0 GPA in Early Childhood courses

**ECE-278 Early Childhood Field Experience II, 3 cr.**
Supervised experience in selected early childhood settings serving children ages birth through eight. Expands upon student's first field experience responsibilities. Includes integration of theory, research, and reflective practice. Provides an understanding of developmentally appropriate practices and the developmental stages of diverse populations of young children and families. Emphasizes professional relationships and behavior, appropriate adult/child interactions, basic curriculum planning, and program routines. Explores the overall operation of a program. Prerequisites: ECE-103, ECE-133, ECE-158, ECE-159, ECE-170, ECE-243, ECE-221, ECE-262, ECE-140, ECE-290 with 2.0 Cumulative GPA and 2.0 GPA in Early Childhood courses

**ECE-290 Early Childhood Program Admin, 3 cr.**
Covers the basic principles involved in setting up, equipping and administering a child care center. Emphasis is on business procedures, insurance, funding, state and federal regulations, staff and community relations, record keeping, policy writing, program evaluation and child care advocacy. Prerequisite: ECE-272, ECE-261, ECE-140.

**Economics**

**ECN-120 Principles of Macroeconomics, 3 cr.**
Reviews national income and output; employment and prices; money and credit; government finance; monetary and fiscal policy; economic growth and development; and international finance.

**ECN-130 Principles of Microeconomics, 3 cr.**
Reviews the organization and workings of modern economic systems; the role of markets, prices and competition in the promotion of economic welfare, alternative systems and international trade.

**Education**

**EDU-210 Foundations of Education, 3 cr.**
An introduction to professional education providing a historical and philosophical background from which the student can examine his or her commitment to education. Challenges and issues in education today will be discussed in the context of school organization, funding, curriculum, professionalism, legal issues and effective teacher characteristics.

**EDU-212 Educational Foundations, 3 cr.**
An introduction to professional education providing a historical and philosophical background from which the student can examine his or her own commitment to education. Challenges and issues in education today will be discussed in the context of school organization, funding, curriculum, professionalism, legal issues and effective teacher characteristics.

**EDU-215 Introduction to Education Lecture, 3 cr.**
Introductory professional education course with an overview of the foundations of education in America, including current professional, social and philosophical issues in education.

**EDU-217 Introduction to Education Lab, 1 cr.**
Students will complete 40 hours of observation and assistance in a K-12 setting.

**EDU-235 Children's Literature, 3 cr.**
Teaches the criteria for choosing the best children’s literature and applies that criteria to evaluating materials to be used in the classroom.
Engineering Technology

EGT-114 Introduction to Engineering Technology, 3 cr.
This course helps students explore the different areas of engineering and engineering technology. This course gives students a basic understanding of how to create and read engineering drawings. This course will also prepare students, using sketching, to extend perceptual and visualization skills which in turn will later serve the student in producing CAD drawings and in the design process.

EGT-117 Fluid Power Fundamentals, 2 cr.
This course will introduce students to the basic principles and components of fluid power systems. Students will also learn how to read fluid power schematics and troubleshoot basic systems.

EGT-137 Fluid Power Control, 4 cr.
This course covers maintenance and troubleshooting fluid power electrical controls such as relay logic, programmable controls and servo controls. Troubleshooting and maintenance of servo valves and proportional control valves as well as other fluid power components are covered. Logical control sequences are presented to instruct the student on the concepts used in industrial controls automation. Pre-Req: EGT-117 & ELT-125

EGT-139 Statics Engineering, 3 cr.
Statics Engineering is a course normally taken by engineering students or those seeking employment in engineering firms. In statics, one studies methods for the determination of support forces and relationships between internal force distributions and external loads for stationary structures. Co-requisite: PHY-212

EGT-146 Basic Hydraulics, 3 cr.
This course will introduce students to the basic structure and application of hydraulics. Students will also learn how to read hydraulic schematics and troubleshoot basic hydraulic components.

EGT-932 Engineering Technology Practicum, 5 cr.
Provides on-the-job learning experience in the engineering-tech industry. Prerequisite: Completion of Term 1 and Term 2 courses.

EGT-934 Engineering Technology Internship II, 4 cr.
Students will complete job contact experience in their field of choice. A minimum of 288 job contact hours is required by this 4-credit course.

EGT-946 Engineering Technology Internship I, 6 cr.
Students will complete job contact experience in their field of choice. A minimum of 432 job contact hours is required by this 6-credit course.

EGT-950 Engineering Technology Seminar, 2 cr.
The seminar will explore current trends, issues, and companies related to the area of study. Students will have the opportunity to research one of these aspects to enhance their understanding of the implications and impact the industry has on their personal and societal goals.

Electrical Technology

ELE-119 Basic Electricity I, 3 cr.
Electricity Theory I consists of instruction that will build upon experience gained in Electric Theory I. Course will be using hand and power tools in the labs for wiring practices and installations.

ELE-136 Basic Electricity II, 4 cr.
Electric Theory II consists of instruction that will build upon experience gained in Electric Theory I. Students will be introduced to advanced concepts of electrical theory. Pre-Req: ELE-119

ELE-155 NEC I, 2 cr.
A continuation of the NFPA 70® National Electrical Code®. The course covers Chapters 1 and 2 of the Code, including the structure of the Code, requirements of electricians, and basic wiring and protection.

ELE-156 NEC II, 2 cr.
A continuation of the NFPA 70® National Electrical Code®. The course covers Chapters 3 and 4 of the Code, including wiring methods, materials, and general equipment. Pre-Req: ELE-155

ELE-158 NEC III, 2 cr.
A continuation of the NFPA 70® National Electrical Code®. The course covers Chapters 5 and 6 of the Code, including special occupancies and equipment. Pre-Req: ELE-155 & ELE-156

ELE-181 Residential Electric/Electronics Systems, 4 cr.
This course is designed to introduce students to residential wiring. Discussion topics will include safety, planning, using residential building plans, calculating loads, and wiring methods. Lab settings will require the student to use hand tools and wire circuits. The National Electrical Code will be used in depth to determine the requirements used for residential wiring. We will be using hand and power tools in the labs for wiring practices and installations.

ELE-182 Basic Electronics, 4 cr.
Students will gain understanding about analog and digital electronics at basic level of familiarization with the semiconductor devices and their functions. The course focuses on applications and apparatus used in wind turbine technology. The course is accompanied by laboratory work. Pre-Req: ELE-119 & ELE-136

ELE-183 Electrical Practical Applications, 4 cr.
Electrical Practical Applications will provide students with practical wiring exercises involving installation, wiring, and troubleshooting of electrical devices and equipment used in, but not specific to, wind turbine control systems. Students will study electrical diagrams, design of electrical systems, and electrical safety. Pre-Req: ELE-226

ELE-226 Electric Motors & Generators, 4 cr.
Electric motors & generators is an introduction to basic electrical theory and components that make up electrical circuits. Direct Current and Alternating Current will be introduced and basic laws for voltage, current and power relationships will be presented in lecture and laboratory format. Course content will include, but not be limited to basic circuits, electrical components and their applications. Hands-on reinforcement of theory covered during lecture is practiced in lab.

ELE-228 Electric Theory I, 3 cr.
Electric theory course introduces basic electrical theory and components that make up electrical circuits. Direct Current and Alternating Current will be introduced and basic laws for voltage, current and power relationships will be presented in lecture and laboratory format. Course content will include, but not be limited to basic circuits, electrical components and their applications. Hands-on reinforcement of theory covered during lecture is practiced in lab.

ELE-242 Programmable Logic Control Systems, 4 cr.
Programmable Logic Control Systems, 4 cr.
Course covers Chapters 7, 8, and 9 of the Code, including special conditions, communications systems, and applicable tables to the Code. Pre-Req: ELE-119, ELE-136, ELE-182

ELE-255 NEC IV, 2 cr.
Course covers Chapters 7, 8, and 9 of the Code, including special conditions, communications systems, and applicable tables to the Code. Pre-Req: ELE-155, ELE-156, ELE-158
ELE-354 Commercial Electric/Electronics Systems, 3 cr.
This course introduces students to commercial wiring. It begins with the planning of the commercial installation by using blueprints, layout, and calculations. They will be required to calculate load for branch circuits, feeders and the electrical service. Wiring methods, luminaires, motors and overcurrent protection will also be covered. The National Electrical Code requirements will be used and explained to understand how they are applied to commercial installations. The labs will consist of bending conduit and use hand tools for wiring methods and practices. Pre-Req: ELE-181

ELE-357 Industrial Electrical/Electronics Systems, 3 cr.
This class will deal with the wiring aspects and electrical components of industrial installations. Modern industrial plants require technicians to be knowledgeable in high voltage, medium voltage, and low voltage systems. Systems from the substation, overcurrent protection, conductors, capacitors, and power quality will be discussed. Wiring methods and practices for hazardous locations will be taught in the class also. Pre-Req: ELE-181 & ELE-354

ELE-933 Electrical Technology Practicum, 5 cr.
Provides on-the-job learning experience in the electrical industry. Prerequisite: Completion of Term 1 and Term 2 courses.

ELE-934 Electrical Technology Internship II, 4 cr.
Students will complete job contact experience in their field of choice. A minimum of 288 job contact hours is required by this 4-credit course.

ELE-946 Electrical Technology Internship I, 6 cr.
Students will complete their internship (practicum) through job contact experience to improve their readiness to enter their chosen field and focus them on the advanced training in their second year prior to graduation. A minimum 3-page, APA formatted synopsis of their experience is required upon completion of the internship.

ELE-950 Electrical Technology Seminar, 2 cr.
The seminar will explore current trends, issues, and companies related to the area of study. Students will have the opportunity to research one of these aspects to enhance their understanding of the implications and impact the industry has on their personal and societal goals.

Electronics

ELT-125 Advanced PLC, 3 cr.
This course will introduce students to advanced programming commands through industrial applications. Concepts include sequencers, file moves, arithmetic functions and data communications from different PLC platforms.

ELT-309 Digital Circuits & Systems 3 cr.
This course provides students with knowledge and understanding of digital logic circuit design and operation using integrated circuits. Studies include combinatorial logic circuits, flip-flops, arithmetic circuits, counters and registers, memory devices and logic families. Prerequisite: ELE-119. Co-requisite: ELE-136 & ELE-242

Emergency Medical Services

EMS-112 EMS First Responder, 3 cr.
Students will learn recognition of symptoms of illness, injuries and proper procedures for basic emergency care. The curriculum for this course is the National Curriculum of the US Department of Transportation, National Highway Traffic Safety Administration and the US Department of Health and Human Services, Child Health Bureau.

EMS-219 EMT-Basic I, 3 cr.
This is the 1st of two courses designed to educate students to an entry level Emergency Medical Technician-Basic serving a vital link in the chain of the healthcare system. Instruction of this course is related to patient assessment in areas of basic life support, cardiac arrest, trauma, and medical emergencies. Overview of anatomy and physiology and medical terminology is included. The combined lecture/lab course provides the student an opportunity to apply cognitive knowledge and psychomotor skills in a supervised setting.

EMS-226 EMT-Basic II & Lab, 3 cr.
This is the 2nd of two courses designed to educate students to an entry level Emergency Medical Technician-Basic serving a vital link in the chain of the healthcare system. When taking this course the student will learn proper procedures to demonstrate skills necessary for the individual to provide emergency medical care at the basic level. Instructional items covered during this are related to OB/GYN emergencies, bleeding shock and trauma will be covered in detail. The combined lecture/lab course provides the student an opportunity to apply cognitive knowledge and psychomotor skills in a supervised setting.

English Composition

ENG-003 Writing Foundations, 1 cr.
Basic writing course designed for students in certificate programs.

ENG-012 Basic Writing, 2 cr.
Individualized course in general grammar review including usage and punctuation.

ENG-035 Writing Strategies, 3 cr.
Developmental writing course designed to prepare students for college level writing. This course includes a general grammar review and prewriting strategies. Different types of paragraphs and essay writing is covered.

ENG-062 Intro to College Writing, 2 cr.
This course will prepare students for college level writing.

ENG-105 Composition I, 3 cr.
Emphasis on expository and argumentative writings including a review of usage and mechanics. Prerequisite: satisfactory score on the ACT, Accuplacer, ASSET,COMPASS as determined by Iowa Lakes policy.

ENG-106 Composition II, 3 cr.
Continuation of ENG-105 with emphasis on research and documentation as well as literary analysis. Prerequisite: ENG-105.

ENG-221 Creative Writing, 3 cr.
Processes and methods of creating poetry and fiction. Reading the work of professional writers and applying various techniques of imaginative writing through workshops, discussion and individual conferences.

Environmental Science

ENV-145 Conservation Biology, 4 cr.
This course examines the ecological principles used in the preservation of biological diversity. Some topics explored are population dynamics, conservation genetics, island biogeography, mathematical modeling of ecological systems, disturbance ecology, Geographic Information Systems (GIS), reserve theory and wildlife corridors. Labs will involve field work, data analysis, computer work and research.
English as a Second Language

ESL-045  ESL Reading III, 3 cr.
This course is designed to introduce students with limited English proficiency to the written language skills that will be needed in order to be successful in academic classes and in the community. While its focus will be primarily on the graphically related skills of reading and writing, it will also introduce students to basic speaking and listening skills as well as expand vocabulary, grammar, and syntax knowledge. It is designed as the reading companion course to English as a Second Language Intermediate Writing. Prerequisite: ESL Compass reading score below 70.

ESL-051  ESL Writing III, 3 cr.
This course is designed to introduce students with an intermediate English proficiency to the written language skills needed to be successful in college classes and in the community. It will introduce students to basic writing skills as well as expand vocabulary, grammar and syntax knowledge. Prerequisite: ESL Compass score below 70.

ESL-065  ESL Reading IV, 3 cr.
This class continues a student's development of the Cognitive Academic Language Proficiency (CALP) skills required for college reading success. Prerequisite: ESL-045 or ESL Compass reading score above 70.

ESL-071  ESL Writing IV, 3 cr.
This course is designed to introduce students with an intermediate English proficiency to the written language skills needed to be successful in college classes and in the community. It will introduce students to basic writing skills as well as expand vocabulary, grammar and syntax knowledge. Prerequisite: ESL-051 or ESL Compass writing score above 70.

ESL-074  ESL Listening/Speaking IV, 3 cr.
This course is designed to introduce students with limited English proficiency to the oral language skills that will be needed in order to communicate successfully in academic classes and in the community. Students will learn the basics of note taking in lecture, audio, and audio visual presentation in academic situations. They will learn how to gist, how to recognize important points, organize and outline information presented in audio and visual formats. They will also learn the basics of small group communication, including appropriate preparation, roles, small group dynamics, cultural variations, and small group facilitation and leadership. Writing assignments will include classification, analysis, analogy, and other expository devices. They will be exposed to a variety of dialects, speech patterns, idioms, and cultural forms of communication appropriate to the classroom/college experience. Additionally, students will receive extensive instruction in pronunciation necessary for academic discourse. While its focus will be primarily on the oral skills of listening and speaking, it will also introduce students to basic reading and writing skills as well as expand vocabulary, grammar, and syntax knowledge. Prerequisite: ESL-045 or ESL Compass score 67 and above.

Environmental Studies

EVS-112  Biological Science for Water Quality, 4 cr.
Biological Science for Water Quality - Biological Science for Water Quality is designed to provide students with a basic understanding of the principles of biology encountered in the water quality technology field, including introductory biological, ecological, and microbiological concepts.

EVS-113  Physical Science for Water Quality, 4 cr.
Physical Science for Water Quality is designed to provide students with a basic understanding of the principles of physics and chemistry encountered in the water quality technology field, including introductory physical and chemical concepts.

EVS-114  Environmental Studies I, 4 cr.
Environmental Studies I is an introduction to ecology and environmental science. This course acquaints the student with the relationship between humans and their environment and the environmental problems that often develop because of this relationship. Topics covered include concepts of ecology, population dynamics, human ecology and environmental law. Lecture and laboratory.

EVS-124  Environmental Studies II, 4 cr.
Environmental Studies II is an introduction to the study of global resources management and the analysis and control of environmental pollution. This course acquaints the student with the fundamentals of resource management and the physical, chemical, and biological analysis of pollutants that contaminate the Earth's biosphere. Topics covered include global resources, resource management, environmental pollution and pollution control. Lecture and laboratory.

EVS-173  Intro to Water Resources, 3 cr.
Introduction to Water Resources is designed to provide the student with a basic understanding of surface water and groundwater resources, the environmental problems associated with these resources, and the techniques utilized to manage and use these resources.

EVS-203  Environmental Seminar I, 1 cr.
Environmental Seminar I is an opportunity for career exploration and development of job seeking skills. Emphasis is placed on familiarization of environmental and conservation agencies, resume' preparation, and job seeking skills including preparation of job correspondence and application forms, and participation in job interviews.

EVS-204  Environmental Seminar II, 1 cr.
Environmental Seminar II is an opportunity to prepare for participation in cooperative education and to develop a presentation to be made in a seminar format. Emphasis is placed on continued development of job seeking skills, preparation for the Environmental Studies Practicum, and the skills needed to prepare and make a presentation addressing a current environmental topic.

EVS-205  Water Quality Seminar, 1 cr.
Water Quality Seminar is an opportunity for career exploration and development of job seeking skills. Emphasis is placed on familiarization of water quality agencies and businesses, resume' preparation, and job seeking skills including preparation of job correspondence and application forms, and participation in job interviews.
EVS-214 Water Quality Analysis, 4 cr.
Water Quality Analysis is designed to provide the student with a basic understanding of water pollution and its impact on water quality; physical, chemical, and biological parameters utilized to determine the quality of water; and the laboratory techniques performed to measure those water quality parameters.

EVS-224 Water Distribution & Wastewater Collection Systems, 4 cr.
Water Distribution and Wastewater Collection Systems is designed to provide the student with a basic understanding of the hydrology and hydrologic characteristics of water, the characteristics and capacity of the components of distribution systems, the characteristics and capacities of the components of collection systems, and the mathematical procedures performed to monitor and evaluate the effectiveness of distribution and collection systems.

EVS-234 Introduction to Environmental Science, 4 cr.
Introduction to Environmental Technology places an emphasis placed on the recognition, inventory, and evaluation of environmental pollutants. Attention is given to the sources and types of environmental pollutants and the problems that they create. Topics covered include environmental impact, air pollution, water pollution, and hazardous materials.

EVS-244 Environmental Science Techniques, 4 cr.
Environmental Technology Techniques places an emphasis on the problems associated with environmental pollution and the techniques available to monitor, document, and control environmental pollution. Attention is given to those environmental problems that may cause sickness or impaired health in humans. Topics covered include environmental regulations, environmental safety, control of pollutants, and waste management.

EVS-254 Intro to Natural Resources Management, 4 cr.
Introduction to Natural Resources Management places an emphasis on the recognition, inventory, and conservation of natural resources. Attention is given to the distribution and availability of natural resources and the limitations associated with their usage. Topics covered include management of natural resources, hydrospheric resources, lithospheric resources, and atmospheric resources. Lecture and laboratory.

EVS-264 Natural Resources Management Techniques, 4 cr.
Natural Resources Management Techniques places an emphasis on the problems associated with the usage of natural resources and the techniques available to evaluate, develop, and manage natural resources. Attention is given to renewable resources and the management techniques that can be utilized to best conserve these resources. Topics covered include wildlife management, forest and recreational land management, agricultural and range-land management, and fisheries management.

EVS-274 Water Processing, 4 cr.
Water Processing is designed to provide the student with a basic understanding of the characteristics of processed water, the technologies utilized to process water, the operation of water distribution and processing systems, and the laboratory techniques performed to monitor and evaluate the effectiveness of water processing.

EVS-284 Wastewater Treatment, 4 cr.
Wastewater Treatment is designed to provide the student with a basic understanding of the characteristics of wastewater, the techniques utilized to treat wastewater, the operation of wastewater collection and treatment systems, and the laboratory techniques performed to monitor and evaluate the effectiveness of wastewater treatment.

EVS-941 Environmental Studies Internship, 4 cr.
Environmental Studies Practicum is an opportunity for students to gain hands-on experience in a field and/or laboratory setting through a cooperative education agreement between the college and the sponsoring agency, business, or individual. The practicum is meant to be an actual job situation in environmental technology or natural resources management.

EVS-946 Water Quality Internship, 6 cr.
Water Quality Internship is an opportunity for students to gain hands-on experience in a field and/or laboratory setting through a cooperative education agreement between the college and the sponsoring agency, business, or industry. The internship is meant to be an actual job experience in water quality technology.

Finance

FIN-101 Principles of Banking, 3 cr.
Fundamentals of bank functions, designed for bankers and prospective bankers. Develops an understanding of where banking has been and where it is going. Studies deposit, payment and credit functions as well as funds management and specialized products and services.

FIN-121 Personal Finance, 3 cr.
The basics of budgeting and buying, the intricacies of home ownership, income tax and investments and the use of insurance, wills and trusts.

Foreign Language-Spanish

FLS-141 Elementary Spanish I, 4 cr.
Introduction to the Spanish language and culture; practice in all the basic skills.

FLS-142 Elementary Spanish II, 4 cr.
Continuation of FLS-141, which is a prerequisite.

FLS-181 Spanish for Heritage Speakers, 2 cr.
This course is designed to provide non-Spanish speaking professionals with functional skills in Spanish. Spanish phrases, commands and questions practical to education are covered. No prior knowledge of Spanish necessary.

FLS-141 Elementary Spanish I, 4 cr.
Continuation of FLS-141, which is a prerequisite.

FLS-242 Intermediate Spanish II, 4 cr.
Continuation of FLS-241, which is a prerequisite.

Geography

GEO-121 World Regional Geography, 3 cr.
Introductory course in college geography dealing with location, interaction and interdependence of countries of the world.
GRA-118  Electronic Publishing, 3 cr.
Basic understanding of the components used in an electronic publishing system and an introduction to desktop publishing. Emphasis is on using a computer for page layout using existing art, creating art and combining text and art to create page layouts and output to hard copy. Software training on Adobe InDesign.

GRA-121  Digital Drawing, 3 cr.
Graphic image design introduction using the Adobe® Illustrator program. Students will create both black and white and multicolor graphics using Illustrator’s tools and menu commands. A vinyl cutting project will be completed.

GRA-140  Digital Imaging, 3 cr.
This introductory course covers the core concepts associated with digital imaging. Adobe Photoshop is used for creating, manipulating, and enhancing digital images for print and screen-based media. Students learn how to effectively use this software in a graphic design environment; planning and carrying out professional digital imaging projects. This course introduces both basic visual design concepts and a comprehensive understanding of digital workflow, providing the student with a foundation for print, web, interactive, animation, and game design projects.

GRA-141 Digital Imaging II, 3 cr.
This course advances the ideas and techniques taught in Digital Imaging I with an emphasis on Adobe Photoshop CS3 3D tools, and exporting images for use in Adobe After Effects and Flash multimedia projects. Students will also explore advanced techniques in the use of curves, levels, blending modes, special effects, as well as painting and drawing tools. Students will be challenged as a designer working with real-world projects. Prerequisite: GRA-140

GRA-162  Web Page Graphics, 3 cr.
An introduction to the creation of graphics and animation for use on web pages using current software programs such as Adobe Photoshop, Illustrator, and Flash. This course first introduces the standard Web based image formats and then quickly moves into the Flash environment. Flash concepts include animation basics, tweening, Flash symbols and instances, buttons, movie clips, and beginning ActionScript.

GRA-166  Web Animations, 3 cr.
This course advances the ideas introduced in Flash I (GRA-228) to create interactive and media rich content for a variety of projects. As this is an advanced level course, you’ll be expected to excel in your projects through your efforts. Students will continue working on time and sound sequencing, storyboard planning for information mapping and animations, rendering files and documents for CD or the Internet. Students will learn advanced ActionScript 3.0 scripting technologies that extend the creative function of web animation. Unique vector and raster methods will be employed while working with software such as Adobe Flash. Students will further their problem solving abilities to utilize time and materials for solutions to distinct interactive problems.

GRA-175  Graphic Design Principles, 3 cr.
Students work with advanced design problems and concepts. Emphasis is placed on the design and preparation of a resume and portfolio.

GRA-188  Advert Layout & Composition, 3 cr.
Balance, proportion and harmony as they apply to printed images on paper. Type selection, copy-fitting, use of ornaments and the psychology of advertising are included.

GRA-228  Flash I, 3 cr.
This introductory course focuses on developing an understanding of manipulating two-dimensional objects into an animation for the web. Students will work with storyboards, vector graphics, timing and key framing, sound, nesting and scenes, and rendering. Project’s final output will be posted on the web or produced for CD. Major software used in this course includes Adobe Flash, Adobe Photoshop, and Adobe Illustrator. All aspects of course projects will be completed by the student - this includes original imagery, sound and video, and artwork. The assignments will acquaint students with the needs and procedures of creating 2D web animations for the market and still be a balance of both web and video animation.

GRA-234  Dreamweaver Level I, 3 cr.
This introductory course focuses on the proper use of web technologies to design and develop web sites. You will use Adobe Dreamweaver to learn how to create properly structured XHTML and Cascading Style Sheet documents, incorporate images, work with colors and backgrounds, present data in tables, and use CSS for laying out web pages.

GRA-235  Dreamweaver Level II, 3 cr.
This course focuses on Advanced CSS and XHTML as well as benefits of web standards and their role in Search Engine Optimization. Topics include CSS navigation methods, advanced CSS layouts and techniques, working with and styling forms, formatting and styling tables, frames and framesets, styling and controlling pages for print, alternative media style sheets, controlling presentation for mobile devices, and working with multiple style sheets.

GRA-236  Dreamweaver Level III, 3 cr.
Combines skills learned from Dreamweaver Levels 1 & 2 with server-side languages and databases such as PHP and MySQL. Topics include PHP syntax and language operating environment, using control structures, loops, and arrays in PHP, form processing, database manipulation, handling record sets, data validation, and concepts and design of Content Management Systems.

GRA-801  Graphic Design Seminar I, 1 cr.
Opportunity for career exploration and development of job seeking skills. Emphasis is placed on familiarization of businesses employing graphic designs, resume preparation, and job seeking skills including preparation of job correspondence and application forms, and participation in job interviews for the purpose of obtaining a graphic design internship.

GRA-802  Graphic Design Seminar II, 1 cr.
This class is for the student preparing to graduate. It enables the student to compile accomplished works into a quality presentation. Both a traditional case portfolio and a digital portfolio will be developed.

GRA-932  Internship, 2 or 4 cr.
Supervised, paid work experience in a business or industry involved in an area of graphic design.

HCM-104  Applied Food Service Sanitation, 4 cr.
Information and practices to help the food service manager apply sanitation procedures to food handling from purchasing and storage to preparation and serving to patrons. This course is part of the National Restaurant Association management development diploma program and certification.
HCM-105 Food Fundamentals, 4 cr.
Reviews the skills and attitudes needed for successful employment in the food service industry. This course and its components are the latest additions to the ProMgmt program. PrpMgmt is a college-level curriculum driven by industry research and academic excellence and created by the educational foundation of the National Restaurant Association and the Culinary Institute of America.

HCM-141 Food Production, 5 cr.
Preparation of menus and serving foods and aesthetic appeal for dining rooms. Emphasizes meat, vegetables and dessert cookery. Sanitation, quality and cost of foods served to consumers are stressed.

HCM-206 Food Lab I, 2 cr.
An elective course designed to introduce students to the actual operation of quick service institutional cookery, cafeteria operations and banquets.

HCM-208 Food Lab III, 2 cr.
An elective course designed to introduce students to the actual operation of quick service institutional cookery, cafeteria operations and banquets.

HCM-209 Food Lab IV, 2 cr.
An elective course designed to introduce students to the actual operation of quick service institutional cookery, cafeteria operations and banquets.

HCM-214 Culinary Media/Networking, 3 cr.
Culinary Media/Networking explores how the media affects the culinary world through trends, advertising, and business opportunities. It also examines the evolution of the media's development as a tool to reach millions regarding food, food safety, and cooking styles. Students produce a food-related video or audio clip.

HCM-229 Nutrition for the Life Cycle, 4 cr.
Practical, ‘how-to’ course focusing on nutrition as it relates to personal health; foods, and food preparation; menu planning and recipe codification; and marketing of nutritious menu items in the food service industry.

HCM-237 Modified Diets, 4 cr.
Focuses on the basic principles of diet therapy and menu modification for several diseases. Covers nutrition assessment, care plans, anthropometric measurements, diet history and diet instruction.

HCM-239 Customer Service, 2 cr.
This course will introduce students to all aspects of customer service in the business realm and in the hospitality industry. The students learn the major components of a customer-focused environment and the key elements of a service culture. In order to be better prepared for the future, students identify key trends that will impact customer service in the years to come.

HCM-240 Menu Planning & Design, 2 cr.
Menu Planning and Design introduces the concepts of planning menus for institutional and restaurant food service operations with emphasis on customer expectations and how the menu planner identifies those in establishing a workable menu format. Topics include an overview of menu planning considerations, menu marketing and design, and specific criteria for selected restaurants and institutional menus.

HCM-245 Design & Layout of Foodservice Facilities, 3 cr.
Design and Layout of Food Service Facilities investigates the purchase, installation, operation, and routine maintenance of food service equipment. Related topics of design, atmosphere, space allocation and wise energy management will be addressed. The purpose of this class is to discuss the myriad of decisions a new restaurateur or food service manager will be faced with as they enter the industry.

HCM-265 Mathematics for Hospitality, 3 cr.
Reviews the fundamentals of mathematics, including methods of figuring percent, discount, mark-up, mark-down and interest. Problems related to the hospitality industry and practice on the ten-key calculator will be included.

HCM-292 Food Preparation, 3 cr.
This course offers instruction in the fundamentals of basic cooking skills, use of equipment, kitchen safety and basic recipes that are foundations for all culinary learning.

HCM-310 Hospitality Law, 3 cr.
Provides an awareness of laws concerning hotel-motel management and illustrates the possible consequences of failure to satisfy legal obligations.

HCM-330 Hospitality Personnel Management, 2 cr.
Hospitality Personnel Management introduces concepts relevant to managing and communicating in the hospitality organization by presenting a perusal of the managerial process. Topics include personnel planning, organizing, staffing, directing, motivating, and problem-solving skills necessary for effective management. Additional topics cover the development of management as a discipline, theories and styles of management as well as contemporary functions of the managerial role.

HCM-450 Job Seeking Skills I, 2 cr.
Students are exposed to a variety of hospitality areas through field trips and interaction with people currently in the hospitality industry. The class will involve job seeking skills and include actual job search and interviewing experience.

HCM-451 Job Seeking Skills II, 2 cr.
Students are exposed to a variety of hospitality areas through field trips and interaction with people currently in the hospitality industry. The class will involve job seeking skills and include actual job search and interviewing experience. A continuation of HCM-450.

HCM-591 Housekeeping Management, 3 cr.
Technical information for persons seeking careers in the hospitality management area. Covers the day-to-day complexities of the housekeeping profession, from planning and organizing to budgeting, supervising and performing the work itself. Certification course offered through the American Hotel and Motel Association.

HCM-592 Convention Management, 3 cr.
A course designed to provide practical insight into the different kinds of meetings and conventions, the types of organizations that stage such events, and the people who hold the key to site selection. To provide advice and suggestions on how to reach and sell to these important groups and people. To learn how to analyze a hotel property to determine which segments of the market may be sold and serviced successfully and how to organize a staff to go after desired business. Practical advice is also given on how to finalize an event through negotiations and letters of agreement.

HCM-594 Food & Beverage Management, 4 cr.
Includes buying food in quantity and methods of food production for large groups with practical experience gained in a laboratory study of sales, service and control of beverages.

HCM-595 Front Office Operations/Night Audit, 4 cr.
Emphasizes the efficient operation of the front office area, includ-
ing reservations, greeting guests, hotel-motel services and payments. Charge account systems and controls, billing methods, checkout procedures and a learning experience with an accounting posting machine are included.

HCM-602 Introduction to Food & Bar Operations, 3 cr.
Focuses on the management of food and beverage operations in lodging establishments. Includes stewarding, banquet services, restaurant, beverage and room service. Prepares students for internships in lodging operations.

HCM-705 Hospitality Club Activities I, 1 cr.
Developing leadership, teamwork, communication, commitment and cooperation as required in the hospitality industry. P/Q grading.

HCM-707 Hospitality Club Activities II, 1 cr.
Developing leadership, teamwork, communication, commitment and cooperation as required in the hospitality industry. P/Q grading.

HCM-709 Hospitality Club Activities III, 1 cr.
Developing leadership, teamwork, communication, commitment and cooperation as required in the hospitality industry. P/Q grading.

HCM-711 Hospitality Club Activities IV, 1 cr.
Developing leadership, teamwork, communication, commitment and cooperation as required in the hospitality industry. P/Q grading.

HCM-938 On-The-Job Training, 5 cr., 6 cr.
On-the-job training, usually full-time, in a hotel, motel, restaurant or related business.

HCM-939 Workplace Experience I, 3 cr.
Workplace experience (on-the-job training), is usually full-time, in a hotel, motel, restaurant or related business. Prerequisite: Hotel/Motel Restaurant Management Student and successful completion of Sanitation exam.

HCM-940 Workplace Experience II, 3 cr.
A continuation of Workplace Experience I (on-the-job training), usually full-time, in a hotel, motel, restaurant or related business. Prerequisite: Hotel/Motel Restaurant Management Student and successful completion of Sanitation exam, and HCM 939 Workplace Experience I.

Heating, Air Cond. & Ventilation Technology

HCR-102 Intro to HVAC, 3 cr.
An introduction to HVAC systems, with an emphasis on electrical and mechanical fundamentals skills, including AC and DC electricity; electrical power supplies and wiring materials; meter operations; mechanical math and measurement; fasteners; and PVC assembly.

HCR-112 Heating Fundamentals, 3 cr.
This course covers fundamental principles and skills for all common heating systems. This course is a combined lecture and lab course and includes discussions and demonstrations in heating fundamentals. Safety is greatly emphasized as students are working with actual voltages, and working equipment.

HCR-125 Oil & Hydronic Heating, 3 cr.
This course is a combined lecture and lab course studying the theory and applications in electrical resistance and oil and hydronic heating systems as they relate to residential and commercial heat loss requirements. Studies include installation, troubleshooting wiring and control circuits.

HCR-155 Troubleshooting Heating Systems, 3 cr.
The purpose of this course is to introduce the student to the fundamentals of troubleshooting by utilizing a practical and systematic approach to locate and repair heating system malfunctions. The student will also have the opportunity to study, in detail, the motors and controls used in today's heating systems. Topics to be covered include basic electric circuits, electrical test meters, motors and controls, diagnosis of electrical and mechanical malfunctions, and special emphasis on wiring diagrams.

HCR-205 Air Conditioning Principles, 3 cr.
This course is a combined lecture and lab course which deals with the fundamentals of residential air conditioning systems. Emphasizes system components, types of refrigerants, principles of heat transfer, and diagnosis and repair of various systems used in the air conditioning industry. Studies relationship to temperature and pressure variance including psychrometric comparison as applied to commercial and residential air conditioning.

HCR-240 Troubleshooting Air Conditioning Systems, 3 cr.
The purpose of this course is to introduce the student to the fundamentals of troubleshooting by utilizing a practical and systematic approach to locate and repair air-conditioning and heat pump system malfunctions. The student will also have the opportunity to study, in detail, the motors and controls used in today's air-conditioning and heat pump systems. Topics to be covered include basic electric circuits, electrical test meters, motors and controls, diagnosis of electrical and mechanical malfunctions, and special emphasis on wiring diagrams.

HCR-291 Commercial Systems, 3 cr.
This course covers all types of commercial heating and cooling systems. Systems included are air cooled and water cooled air conditioning systems, cooling towers, water chillers, gas and electric heating systems for heating air and water, industrial heating systems including direct fired make up air equipment. Commercial water heaters and controls will also be discussed.

HCR-305 Fundamentals of Refrigeration, 3 cr.
This course is a combined lecture and lab course covering the theory and laws governing refrigeration, the operation of refrigeration systems, heat transfer, components, and test equipment. It also covers the different soldering and brazing methods and materials used in refrigeration service. Emphasis is on the recovery, recycling and charging methods used.

HCR-414 Controls for HVACR, 4 cr.
This course presents a more advanced study of electrical controls and their applications, an introduction electronics and the controls used in the H.V.A.C.R. systems.

HCR-415 Controls for HVACR, 3 cr.
This course presents a more advanced study of electrical controls and their applications, an introduction electronics and the controls used in the H.V.A.C.R. systems.

HCR-444 HVACR Systems I, 4 cr.
This course presents alternative application of energy sources and equipment as they apply to heating, ventilation, air cooling, and refrigeration systems.

HCR-505 Air Distribution, 3 cr.
A study of the construction and design of duct work and related duct fittings. Includes correct layout and sizing of ducts, return and supply grills, and use of airflow measuring instruments.
HCR-810 Energy Management, 3 cr.
This course is designed to examine the consumption of energy in commercial and industrial buildings and how energy usage may be reduced.

HCR-932 Internship, 4 cr.
On the job training for Heating, Air Conditioning, and Ventilation program. Prerequisite: HCR-102

HCR-934 Heating, Ventilation & Air Conditioning Internship II, 4 cr.
Students will complete job contact experience in their field of choice. A minimum of 288 job contact hours is required by this 4-credit course.

HCR-946 Heating, Ventilation & Air Conditioning Internship I, 6 cr.
Students will complete job contact experience in their field of choice. A minimum of 432 job contact hours is required by this 6-credit course.

HCR-950 Heating, Ventilation & Air Conditioning Seminar, 2 cr.
The seminar will explore current trends, issues, and companies related to the area of study. Students will have the opportunity to research one of these aspects to enhance their understanding of the implications and impact the industry has on their personal and societal goals.

History

HIS-110 Western Civilization: Ancient to Early Modern, 3 cr.
Surveys the origins of human civilization in the Near East, the great rise of Greece and Rome and concludes with the Enlightenment.

HIS-111 Western Civilization: Early Modern to Present, 3 cr.
Examines an extremely dynamic phase of European and world history.

HIS-151 U.S. History to 1877, 3 cr.
Study of national foundations, colonial background, revolution, confederation and institutions; nationalism and expansion. The growth of democracy and war plus reconstruction are analyzed.

HIS-152 U.S. History Since 1877, 3 cr.
Covers re-union growth of big business, expansion and World War I, rise to world power, isolation, modern industry, depression, recovery and internationalism.

HIS-201 Iowa History, 3 cr.
Provides an understanding of the history of Iowa as it relates to international history. Special attention is given to ethnic groups and their contributions.

HIS-251 U.S. History 1945 to Present, 3 cr.
Investigation of the rise of the United States after World War II to the modern country of the present. Topics include: aftermath of World War II, nuclear power, the Cold War, Vietnam, diplomacy, presidential power, and family life.

HIS-255 American Indian History & Culture I, 3 cr.
A survey of the important events and cultures of the Native American people from the earliest times to the reservation era. The survey will be limited to the Native people of the United States and Alaska.

HIS-257 African American History, 3 cr.
Deals with the experience of blacks in the history of the United States. Topics include African Heritage, the slave trade, slavery in the Antebellum South, the Civil War and emancipation, the Jim Crow era, the Harlem Renaissance, the civil rights struggle, and modern black America.

HIS-949 Special Topics, 3 cr.
Special Topics expands the curriculum by allowing students to enroll for up to three semester credits in a specific course or program area. Subject matter may be an in-depth extension of the particular area and is developed by the teaching faculty to meet unique interests and needs of the student. Students may apply up to, but no more than, three semester credit hours of Special Topics courses toward their general education requirements.
The course will focus on World War II, the events leading to, overview of important developments during the war and analyze the impact and long-term consequences of the war.

Health Information Technology

HIT-244 Basic CPT Coding, 3 cr.
Systematic coding concepts using CPT/HCPCS coding and classification systems. Emphasis is placed on assigning and classifying valid procedure codes in ambulatory care, emergency room, operating room and physician office settings. Students work with actual medical records, placing emphasis on accuracy outpatient coding guidelines and conventions, reimbursement and billing as well as compliance issues.

HIT-245 Basic ICD-9-CM Coding, 3 cr.
Classification of disease and diagnostic processes through ICD-9 coding, placing emphasis on accuracy, concepts and compliance issues. ICD-9 coding is used for identification of medical necessity in procedures, reimbursement, utilization patterns and the study of health care costs.

HIT-312 Health Informatics and Information Management Systems, 3 cr.
The health information professional plays a central role in the delivery of health care including the development and implementation of the electronic health record and management of data. This course introduces the student to basic principles of health information management, basic concepts of clinical data management and overview of information technology.

HIT-601 Medical Transcription, 2 cr.
Develops proficiency in the use of dictation and transcription equipment. Medical cases will be utilized to acquire skills that will enable the student to design and transcribe 7 types of reports utilized in the medical offices and clinics today. Application, proofreading as well as medical terminology and anatomy is continuous within the learning process. Pre-req: CSC-110 & HSC-114 Co. Req: Bio-168, BIO-173, & HSC-217

Health Sciences

HSC-105 Introduction to Health Occupations, 1 cr.
This course introduces both the variety and requirements for health care careers. Basic core knowledge and professional expectations common to all health careers are explored. Workplace safety, and an overview of the health system and current trends are also covered.

HSC-109 Exploring Health Careers & Building Teams, 3 cr.
Student will discover the main options available, including roles and responsibilities, in health career options. This course is designed to provide the student with the information necessary to make their health career choice. Prerequisite: HSC-105
HSC-114 Medical Terminology, 3 cr.
Studies medical terminology, including spelling and definitions.

HSC-134 First Aide/CPR, 1 cr.
Emergency care for the injured. Airway management, hemorrhage control, care for shock victims, CPR/lifesaving skills.

HSC-151 Dosage Calculations, 1 cr.
Dosage Calculations emphasizes the basic math skills and dosage calculations required of nurse professionals. P/Q grading.

HSC-152 Dosage Calculations, 2 cr.
This course provides an in-depth review of basic math skills necessary to calculate drug dosages. Dimensional analysis will be utilized to apply these skills to dosage calculations for nursing students. P/Q grading.

HSC-153 Concepts in Pharmacology, 3 cr.
Concepts in Pharmacology introduces the student to concepts of drug actions and interactions. This course focuses on the principles of pharmacology and commonly utilized classifications of medications.

HSC-161 Normal Nutrition A, 1 cr.
Building on basic knowledge of the nutrients this course explores current issues related to nutrition including consumer health, nutrition styles throughout the lifestyle, religious and cultural factors, weight control, and physical fitness.

HSC-163 Nutrition, 3 cr.
Provides the student with a basic background of the nutrients essential to maintain the physical and mental well-being of the human body. An overview of the digestive processes and the relationship to each group of nutrients is presented. Basic nutritional principles of food selection are studied with an emphasis on health promotion throughout the life cycle. Students examine their personal eating habits and identify ways to promote a health nutritional status. Topics include: digestion, lifecycle nutrition, energy/metabolism, sports, protein and weight management, heart disease and fat, diet, health and alcohol, diabetes and carbohydrates, vitamins, minerals, food safety and world view of nutrition.

HSC-172 Nurse Aide, 3 cr.
The academic component of the program preparing persons for employment as a nurse aide in long term care and in skilled nursing units in Iowa’s Hospitals. The clinical component may be accomplished by completing HSC-177. Upon satisfactory completion of both course, which meet both federal and state requirements, the student is eligible to write the state-approved competency examination and skill test for certification.

HSC-177 Nurse Aide II, 3 cr.
Classroom and clinical experience combine to provide training in basic nursing skills, attitudes and understanding the role of the nurse aide. Prerequisite: HSC-172.

HSC-186 Human Growth and Development, 3 cr.
Exploration of the normal characteristics, physical, social and emotional development of individuals from infancy through the aged adult. This course will include a discussion of how the various theorists view the stages of growth and development through the lifespan.

HSC-187 Human Growth and Development – Adult, 1 cr.
An exploration of the normal characteristics, physical, social and emotional development of individuals from the young adult through the aged adult. This course will include a discussion of how various theorists view the stages of growth and development through the lifespan.

HSC-192 Emergency Preparedness, 1 cr.
This course focuses on knowledge and skills to prepare and respond in an emergency situation. Students will receive training in basic infection control, first aid techniques, cardiopulmonary resuscitation (CPR) and emergency preparedness for natural disasters.

HSC-202 Health Informatics, 2 cr.
Health Informatics will provide an overview of basic computer skills as well as introduce the student to concepts related to information literacy and management. Utilization of informatics within the healthcare delivery systems including application of the Health Information Portability and Accountability Act (HIPAA) will be included.

HSC-213 Concepts of Pathophysiology, 4 cr.
Provides an in-depth analysis of the changes that occur in the human body as a result of disease or injury. Pathophysiologic concepts and common alterations occurring in the body systems will be defined and discussed. Interrelationships between risk factors, clinical signs, disease processes and medical treatment of common alterations will be analyzed. Prerequisites: BIO-168 & BIO-173.

HSC-217 Introduction to Pathology, 3 cr.
This course is designed to provide the student with the body systems disease process by presenting the disorders, etiology, progression, signs and symptoms and standard approaches to diagnosis and treatment.

Human Services

HSC-140 Social Work and Social Welfare, 3 cr.
Goals, values and legal aspects of the social work profession. Roles of social workers in human service institutions. Service learning experience at an agency is included.

HSC-162 Intro to Human Disabilities & Services, 3 cr.
Introduces classifications, etiology, characteristics, educational and vocational considerations of persons with disabilities.

HSC-225 Counseling Techniques, 3 cr.
This is an introductory course in applied counseling techniques. Students are introduced to a variety of facilitative skills and counseling concepts and work through the interviewing process in simulated helping service settings.

HSC-284 Case Management, 3 cr.
This course introduces students to the value base of human services and helping professions. Addresses strategies and practices used in assessing and evaluating client needs, establishing and identifying resources and making appropriate referrals. Intake interviews and assessments are explored. Students will develop knowledge and basic skills in the area of programming and developing support systems and community resources. Students will increase awareness of working with high risk populations.

HSC-293 Substance Abuse and Treatment Planning, 3 cr.
This course is designed to introduce students to a multidimensional approach to assessment in making objective patient placement decisions for various levels of care for the treatment and care of substance-related disorders. This course will help prepare students for their practicum experience. Prerequisite: DSV-135.

HSC-901 Substance Abuse Practicum I, 3 cr.
Supervised experience in a chemical dependency agency as approved by the program coordinator and Iowa Board of Certification for Substance Abuse.
HSV-902 Substance Abuse Practicum II, 4 cr.
Supervised experience in a chemical dependency agency as approved by the program coordinator and Iowa Board of Certification for Substance Abuse.

**Journalism**

JOU-171 Introduction to Photography, 3 cr.
Introduction to the 35mm camera: selection and handling; theory of light; lenses and focusing; depth of field and film types; composition; film processing and basic darkroom techniques.

JOU-173 Digital Photography, 3 cr.
Basic digital theory, how the digital camera works. Includes digital capture; input into the computer; digital manipulation; basic PhotoShop and photography; saving digital images for future use and long term archiving on zip disks, CD’s and hard drives; how to print digital images; and how to send digital images after formatting for sending.

JOU-177 News, Forensics & Advertising Photography, 3 cr.
This course will teach the basic photographic skills needed to create publishable news photographs using 35mm film and digital cameras as well as basic photographic skills needed to create photographs for advertising use and basic crime scene photography. Prerequisite: JOU-171, JOU-173

JOU-180 Digital Imaging for Professionals, 3 cr.
This course will develop skills needed for adjusting and enhancing photographic images after image capture and before going to a final output. The emphasis will be on images used in the photography professions of Portrait, Photojournalism Commercial, and Forensic. All image manipulations and adjustments will be done with computer imaging software, such as Photoshop.

JOU-190 Foundations in Digital Media Marketing, Writing, and Community Engagement, 3 cr.
Designed to acquaint students with the fundamentals of digital reporting through digital media including Internet, social media, photography, video, audio, and multimedia as it applies to journalism. Instruction will include conceptual frameworks and techniques to create multimedia journalism content; the connection to multimedia stakeholders, marketing strategies, and community building; coverage of events with multimedia approaches; the technical and creative aspects of digital writing; delivery platforms for multimedia content including the Web and evolving communication technologies.

JOU-941 Practicum, 2 cr., 5 cr.
Practical work experience related to journalism.

**Paralegal/Legal Studies**

LGL-120 Intro to Law & Paralegal, 2 cr.
An introduction to the legal profession, with special emphasis on the responsibilities of the paralegal. Students will learn the core skills required of paralegals, including verbal and written communication, critical thinking and analytical reasoning, and investigation and case management.

LGL-121 Law Office Software, 1 cr.
This course familiarizes students with law office specific software applications. A representative law office software platform will be utilized to present students with hands-on exercises to further their understanding of the various functions of law office software. Students will also be introduced to and utilize Iowa Docs, a widely utilized, state-specific, legal form-generating software.

LGL-122 Legal Ethics, 2 cr.
This course will introduce students to the types of ethical dilemmas that they will face in the law office setting; generally to the ethical rules developed by the American Bar Association, to the rules adopted by this jurisdiction for the regulation of attorney and paralegal conduct, to the model codes of paralegal associations; and to methods for researching the answers to ethical dilemmas.

LGL-140 Wills, Trusts and Estate Admin, 3 cr.
A study of wills, trusts, probate procedures, estate administration, taxes, and testamentary and intestate succession. Students will learn how to draft basic wills, trusts, and advance health care directives. Students will also learn how to administer a typical estate.

LGL-154 Legal Research, 4 cr.
This course introduces students to various print and electronic legal research media, with a heightened focus on state of Iowa and federal statutory and case law. Students will learn how to carry out legal research assignments using both primary and secondary resources. The methods of updating and expanding research and how to properly cite legal sources in memoranda and other documents will also be presented. Print and electronic methods for finding legal authority will be utilized.

LGL-161 Legal Writing, 4 cr.
In this course, students will utilize and apply the research skills developed in Legal Research (LGL 151), to research and draft opinion letters and other types of legal correspondence, an objective interoffice memorandum, and a persuasive motion brief. Appellate briefs will also be introduced. A foundational aspect of the course will be developing students’ legal reasoning skills.

LGL-180 Torts and Litigation, 3 cr.
A study of tort law, including negligent, intentional, and strict liability torts. Students will learn how to draft pleadings, discovery requests, and pretrial documents in tort cases.

LGL-200 American Trial Process, 3 cr.
A study of the American trial process. Students will research, prepare and present a hypothetical case to a judge and jury.

LGL-205 Employment Law, 3 cr.

LGL-210 Contract Law, 3 cr.
This course surveys the basic principles of contract law, including capacity, formation, conditions, enforcement, statute of frauds, performance and breach, remedies, defenses, and third-party rights. Portions of the Uniform Commercial Code relating to contracts for the sale of goods will also be discussed. The role of the paralegal in gathering information, researching, and drafting contract documents is emphasized throughout.

LGL-230 Criminal Law & Procedure, 3 cr.
Examination of the more common crimes, criminal defenses and the procedures used to process a criminal case from arrest to final disposition.

LGL-240 Civil Procedure and Practice, 4 cr.
A study of civil procedure using the civil procedure rules. Students will learn how to draft demand letters, pleadings, motions, discovery, and judgments. Students will also learn how to prepare a small claims case.
LGL-242 Civil Procedure & Practice, 3 cr.
Introduces students to the various practice rules of procedure in the civil court system, and the role of a paralegal at every stage of pre-trial litigation. The rules of civil procedure and evidence at both the state and federal level will be emphasized. Topics covered include initial client contact, interviewing, investigation and identification of claims and issues, initiating and responding to the lawsuit, the discovery process, settlement, trial preparation, and preparation and filing of appropriate litigation documents.

LGL-250 Family Law, 3 cr.
Study of law and procedures relative to marriage, dissolution and adoption.

LGL-941 Practicum, 4 cr., 6 cr.
Supervised work experience in a law office, legal services office or other law-related agency.

LGL-942 Paralegal Practicum, 2 cr.
Supervised work experience in a law office, legal services office, or other law-related agency.

Literature

LIT-101 Intro to Literature, 3 cr.
Examines literary elements of three major genres of literature: short fiction, poetry, drama and film. Includes both contemporary and traditional works.

LIT-110 American Lit to Mid-1800's, 3 cr.
Explores major American writers (including Native Americans) and their contributions to American letters from Puritan times to 1865.

LIT-111 American Lit Since Mid-1800’s, 3 cr.
Explores major American writers and their contributions to American letters from the post-Civil War era through modern periods.

LIT-120 American Novel, 3 cr.
A survey of the American Novel with emphasis on 20th century works.

LIT-124 American Poetry, 3 cr.
Survey of modern American poetry. Examines both the works and lives of 13 of America's greatest poets.

LIT-133 Minority Voices in U.S. Lit, 3 cr.
An introduction to writers from American minority groups, considered in the social and cultural contexts of the various groups. Includes discussing and writing about various issues.

LIT-150 World Literature I, 3 cr.
Literature from the Ancients, classical Greece and the Renaissance.

LIT-151 World Literature II, 3 cr.
Literature from the Enlightenment through Romanticism, Realism and Naturalism to Modernism.

LIT-161 The Short Story, 3 cr.
Evolution of the short story as a literary form, with emphasis on analysis and appreciation.

LIT-184 Young Adult Literature, 3 cr.
This course is designed to help adults who work with young adults become more familiar with teens and their literature, and select the best literature available based upon criteria and sources that allow for the selection of the best literature for young adults.

Medical Assistant

MAP-111 Medical Office Management I, 3 cr.
Administrative procedures such as reception techniques, telephone skills, appointment scheduling, mail processing, office equipment operation and maintenance, travel arrangements, insurance forms, and coding will be studied.

MAP-114 Medical Office Management I, 4 cr.
This course is designed to emphasize the functions and practices of administrative procedures in a medical office. Students will be introduced to the profession of administrative medical assisting and the various responsibilities of a healthcare professional. Topics include, but are not limited to medical law and ethics, verbal and written communication skills, managing appointments, introduction to health information management, and computer applications in the medical office.

MAP-117 Medical Office Management II, 3 cr.
Covers private and public insurance types, processing and handling claims, insurance coding and legal precautions in claims processing. Instruction in pegboard accounting, banking procedures and financial record keeping, and records management is an integral part of the course. Prerequisite: MAP-111.

MAP-128 Automated Medical Office, 2 cr.
Computer technology and medi-team simulation of an actual medical clinic situation. Recording patient appointments, insurance information, patient medical information and the use of forms for medical office financial transactions.

MAP-133 Medical Transcription, 3 cr.
Develops proficiency in the use of dictation and transcription equipment. Medical tapes of actual case histories, consultations, and surgical diagnostic and autopsy reports are used to provide a realistic experience. Application and correct spelling of medical terminology is continuous with the learning process.

MAP-141 Medical Insurance, 3 cr.
Educates the student in the area of health insurance and billing. Develops an understanding of all health insurance plan options, expansions as well as modifications in state and federal regulations. Instruction will be given in the areas of processing health insurance claims, planning options, carrier requirements, state and federal regulations, abstracting relevant information from source documents, accurately completing claim forms, and coding diagnoses and procedures.

MAP-233 Medical Laboratory Procedures, 4 cr.
Laboratory safety measures and familiarization with the care and use of laboratory equipment. Urinalysis techniques including collection, physical examination and microscopic examination of urine specimens. Microbiology classification and the collection and preparation of microbiological specimens.

MAP-330 Career Prep Medical Asst, 1 cr.
Teaches necessary skills for successful resume writing and job interviewing. Prepares medical assistants for their summer practicum with practical application of learned skills. Orient students to the Practicum experience.

MAP-342 Clinical Assisting I, 3 cr.
On-the-job training to provide students with training in medical asepsis; infection control; interviewing and obtaining patient information; vital signs; vision screening; assisting the physician with various physical examinations; instructing patients with physical therapy needs; and performing electrocardiograms.
MAP-343 Clinical Assisting II, 3 cr.
Further on-the-job training in aseptic techniques and assisting with minor surgery examinations, including the identification and use of instruments; sterilization and disinfection techniques; sterile dressing application; and cast application and care.

MAP-402 Medical Law and Ethics, 2 cr.
This course is designed to provide the student with legal and ethical knowledge to make proper professional judgments. Topics include legal issues pertinent to the medical and chiropractic clinics. Major bioethical and ethical issues are included.

MAP-512 Pharmacology, 2 cr.
This course introduces the Allied Health student to concepts of drug actions and interactions with focus on principles of pharmacology. Students will learn to utilize drug reference books with review on medical terminology as it pertains to prescriptions, documentation, medication administration, medication classifications, and mechanism of action.

MAP-515 Pharmacology, 3 cr.
Commonly administered drugs, their uses and the effect on the body. Information on correct dosage, methods and routes of drug administration, dosage calculation and the legal and ethical standards for the administration and dispensing of drugs by the physician.

MAP-940 Medical Secretary Practicum, 2 cr.
On-the-job training in a position related to the student's career goal.

MAP-941 Practicum, 3 cr.
On-the-job training in a position related to the student's career goal.

MAP 942 Limited Radiology III Practicum, 2 cr.
Students will transfer knowledge gained from Limited Radiology I and II into the clinical setting. The student will perform a total of 80 hours of clinical experience, completing 12 clinical competencies. Six hours of face to face lecture will include instruction of special radiologic views prior to beginning the clinical rotation. Prerequisite: MAP-254.

Mathematics

MAT-004 Mathematics Foundations, 1 cr.
Basic mathematics course designed for students in certificate programs.

MAT-005 Math Refresher, 1 cr.
Developmental studies course. Individualized course, which reviews whole numbers, fractions, decimals, percents and ratios.

MAT-054 Math Strategies, 3 cr.
Developmental studies course that reviews whole numbers, integers, fractions, decimals, percents, ratios, proportions, and graphing utilizing basic algebra.

MAT-100 Elementary Algebra, 3 cr.
This is a beginning course in algebra. Topics include operations on real numbers and algebraic expressions; solving linear equations and their application; factoring; simplifying fractional expressions; radicals and quadratic equations. Does not count toward the mathematics requirement for the AA or AS degree.

MAT-102 Intermediate Algebra, 4 cr.
This course includes the basic properties of the real number system; fundamental operations on algebraic expressions; graphs and functions and relations; radicals; exponents; quadratic equations; graphing calculators to enhance their understanding. Prerequisite: Appropriate mathematics assessment score. Does not count toward the mathematics requirements for the AA or AS degree.

MAT-110 Math for Liberal Arts, 3 cr.
This is a general survey course which includes sets; number systems; elementary algebra; exponents; equations and inequalities; fractions; ratios; proportion and variation; probability and statistics; elementary graphing; consumer mathematics; and an introduction to geometry.

MAT-117 Math for Elementary Teachers, 3 cr.
Basic mathematical content pertinent to elementary teaching. Topics include problem solving, set theory, number systems and bases, number theory, informal geometry, measurement and elementary probability, and statistics. Does not count toward the mathematics requirement for the AA or A.S. degree.

MAT-120 College Algebra, 3 cr.
Operation of real and complex numbers; factoring; exponents; quadratic equations; inequalities; matrices; rational functions; logarithmic functions; and graphing or functions. Prerequisite: MAT-102 or equivalent.

MAT-121 College Algebra, 4 cr.
Topics include linear functions and inequalities; quadratics; conics; polynomials and rational functions; exponential and logarithmic functions; linear systems; matrices and determinants. Additional topics may include sequences, series, permutations, combinations and probability. Prerequisite: MAT-102 or equivalent.

MAT-127 College Algebra and Trig, 5 cr.
Course combines college algebra and trigonometry. Algebra topics covered include functions and their graphs; solving equations and inequalities; polynomial functions; conic sections; and exponential and logarithmic functions. Trigonometry topics covered are right triangle trigonometry; unit circles; trigonometric functions; graphing; verifying identities; solving trigonometric equations; and applications of trigonometry. Prerequisite: MAT-101 or equivalent.

MAT-130 Trigonometry, 3 cr.
Trigonometric functions and their inverses: verifying identities; right triangle trigonometry; unit circles; radian measure; graphing; trigonometry functions; solving trigonometric equations; and applications of trigonometry. Prerequisite: MAT-054, MAT-102, MAT-770, MAT-772, or equivalent.

MAT-140 Finite Math, 3 cr.
An applied mathematics course dealing with mathematics related to most academic disciplines. It provides introduction to matrices, linear programming, combinations, permutations, statistics, mathematics of finance and logic.

MAT-156 Statistics, 3 cr.
This course is designed to provide the student with a foundation of statistical concepts and procedures that can aid the student both as a consumer and producer of statistical information. The emphasis is on descriptive statistics, probability, binomial and normal distributions, elementary sampling theory, hypothesis testing, and regression analysis.

MAT-157 Statistics, 4 cr.
The use of statistics by the methods of descriptive and inferential statistics. Both single and bivariate data are analyzed. Elementary probability and normal probability distributions are studied along with hypothesis testing, linear correlation regression analysis, and analysis of variance. Prerequisite: MAT-101 or 2 years of high school algebra or equivalent.
MFG-505  Lean Manufacturing, 1 cr.
This course covers the principles and techniques of lean manufacturing. Topics include lean principles, value stream mapping, total productive maintenance, manufacturing cells, office cells, setup reduction, pull systems and continuous improvement.

Management

MGT-101  Principles of Management, 3 cr.
Introduces modern management background, organization and principles, managerial planning and control policies and procedures of business firms.

MGT-110  Small Business Management, 3 cr.
Practical approach to the study of establishing and operating a small business. Emphasis will be placed on discussion of case situations and on arriving at viable solutions to day-to-day operational problems.

MGT-130  Principles of Supervision, 3 cr.
An overview of the supervisory job. Basics of supervision and management, including effective human relations skills such as communication, motivation, improving performance and leading work teams. Centers on management functions of planning, organizing, controlling and evaluating. Introduction to key supervisory techniques including delegation, appraisal and counseling.

MGT-165  Principles of Quality, 3 cr.
Principles and success factors for quality improvement for work group supervisors. Focus on skills and knowledge needed by supervisors to lead quality improvement in their work areas. Quality philosophies, concepts and improvement actions will be highlighted. Programs such as ISO 9000 and the Malcolm Baldrige Award will be discussed. Participants will prepare quality improvement plan for their work groups.

MGT-170  Human Resource Management, 3 cr.
Students will learn each step of the process, including developing a job description; advertising; evaluating resumes; pre-screening candidates; negotiating employment agreements; planning and monitoring orientation programs for new employees; and the importance of up-to-date policies.

MGT-178  Employment Law, 3 cr.
Study of the “legalese” of workplace law, covering hiring, firing, promoting, and disciplining employees. Students will learn proper reference checking procedures, sexual harassment issues, equal employment opportunity and affirmative action policies.

MGT-190  Employee Compensation/Benefits Mgmt, 3 cr.
This course focuses on monitoring and organizational benefits such as health, dental, FMLA, wage continuation, workers’ compensation and retirement programs. Students will be introduced to a market survey compensation philosophy and will also learn and practice the tools needed to implement this philosophy. The Manpower Planning Process will also be introduced with discussion of the need and importance of conducting this new survey.

Marketing

MKT-110  Principles of Marketing, 3 cr.
Fundamental principles of the flow of goods and services from producer to consumer, including buying, selling, transportation, storage, finance, advertising and market information as they relate to the marketing structure.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MKT-140</td>
<td>Principles of Selling</td>
<td>3 cr.</td>
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<tr>
<td>MKT-142</td>
<td>Consumer Behavior</td>
<td>3 cr.</td>
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<tr>
<td>MKT-150</td>
<td>Principles of Advertising</td>
<td>3 cr.</td>
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<tr>
<td>MKT-155</td>
<td>Visual Merchandising</td>
<td>4 cr.</td>
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<tr>
<td>MKT-162</td>
<td>Retail Merchandising</td>
<td>3 cr.</td>
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<tr>
<td>MKT-290</td>
<td>Professionalism I: DEX/DECA</td>
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<td>Professionalism IV: DEX/DECA</td>
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<tr>
<td>MKT-299</td>
<td>Digital Audio &amp; Video Production Editing</td>
<td>3 cr.</td>
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<td>MKT-300</td>
<td>Video Field Production</td>
<td>3 cr.</td>
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<td>MKT-301</td>
<td>Mass Media</td>
<td>3 cr.</td>
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<tr>
<td>MMS-105</td>
<td>Audio Production</td>
<td>3 cr.</td>
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<td>MMS-115</td>
<td>TV Studio Production</td>
<td>3 cr.</td>
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<tr>
<td>MMS-122</td>
<td>Career Seminar</td>
<td>1 cr.</td>
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<td>MMS-129</td>
<td>Digital Audio &amp; Video Production Editing</td>
<td>3 cr.</td>
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<tr>
<td>MMS-130</td>
<td>Writing for Digital Media</td>
<td>3 cr.</td>
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<td>MMS-136</td>
<td>Broadcast Writing</td>
<td>3 cr.</td>
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<tr>
<td>MMS-145</td>
<td>Digital Media Law &amp; Ethics</td>
<td>3 cr.</td>
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**Mass Media Studies**

- **MKT-140 Principles of Selling, 3 cr.** Studies the concepts of selling. Includes an understanding of the customer; realizing the importance of product knowledge; securing and conducting sales presentations, analyzing and handling different types of customers; steps in selling; and the importance of maintaining good will. Personality development and principles of selling are stressed.

- **MKT-142 Consumer Behavior, 3 cr.** External influences such as culture, social class and family situations; internal influences such as motivation, attitudes, lifestyles and learning; various models of consumer behavior and how consumer behavior fits into marketing strategy.

- **MKT-150 Principles of Advertising, 3 cr.** Fundamentals and principles of advertising as they pertain to the marketing process. Understanding consumer motivation, identifying the target market, types of media and creation of ads are included.

- **MKT-155 Visual Merchandising, 4 cr.** The principles and elements of design and their relationship to an effective display. Hands-on experience in creating effective displays and planning a visual merchandising schedule. Students learn about display materials and store layout in relation to effective selling.

- **MKT-162 Retail Merchandising, 3 cr.** Techniques and procedures used in determining profits, pricing of goods, inventories and merchandise control. Typical problems faced by merchandisers are presented, analyzed and solved.

- **MKT-290 Professionalism I: DEX/DECA, 1 cr.** Introduction to DECA and what the organization has to offer. The course helps the student gain a better understanding of Distributive Education Clubs of America.

- **MKT-291 Professionalism II: DEX/DECA, 1 cr.** This course helps develop competent professionals in marketing management and merchandising. Delta Epsilon Chi contributes to occupational competence by promoting greater understanding and appreciation for the responsibilities of citizenship in our private enterprise system.

- **MKT-292 Professionalism III: DEX/DECA, 1 cr.** Continuation of the professional development training in DECA.

- **MKT-293 Professionalism IV: DEX/DECA, 1 cr.** Continuation of MKT-292 with more opportunities for professional advancement.

- **MKT-938 On-The-Job Training, 2 cr.** Introductory work experience in the operational phases of the modern retail market. Assignments are tailored to the student’s needs, including basic merchandising, displays, cash register experience and selling to customers. Students are supervised by the coordinator of the program and assigned to work directly under a specific store manager who serves as the on-the-job trainer.

- **MMS-101 Mass Media, 3 cr.** An introductory course that studies mass media and society. The class includes a historical and contemporary overview of industries, professions, processes and social effects of the mass media.

- **MMS-105 Audio Production, 3 cr.** Audio production in both radio and television. The main focus is a radio production. Class discussion and lectures focus on coordination of audio board operation and announcing; creating and producing radio commercials; familiarizing the student with the Smartcaster; and following a playlist. Lab exercises help students develop radio control-board skills, production skills, discipline and structure.

- **MMS-115 TV Studio Production, 3 cr.** Basic operation of a television studio. Students will become familiar with the operation of equipment in the studio (cameras, floor directing, on-camera talent) and control room (directing, the character generator, audio, video). Emphasis will be on practical hands-on elements of studio production.

- **MMS-122 Career Seminar, 1 cr.** This course studies the variety of careers available within the digital and social media profession. As the role of the traditional broadcast journalist has experienced a merging of responsibilities from its counterparts, the emphasis of this course will be to provide the students with an opportunity to explore new and emerging media technologies. The curriculum will be mainly built around presentations from guest speakers and field trips.

- **MMS-129 Digital Audio & Video Production Editing, 3 cr.** This class will introduce the student to not only digital video and audio production but also editing. Students will develop control-board skills, production skills, discipline and structure in addition to identifying video production elements including camera, lighting, audio, switching, editing and special effects.

- **MMS-130 Video Field Production, 3 cr.** Study of the equipment used in field/remote video productions. Students will participate in several single camera field productions, including shooting, directing and post-producing.

- **MMS-136 Writing for Digital Media, 3 cr.** In an age when consumers actively seek multiple platforms and sources for vital information, strong writing skills have never been so important. This course develops digital journalists’ writing abilities by focusing on: organizing complex information, layering primary and secondary sources, developing leads that hook, structuring narrative and teasing out tension, and developing a credible voice. Students will also advance their understanding of grammar and editing and refine their creative thinking and language skills.

- **MMS-145 Broadcast Writing, 3 cr.** An instructional workshop for developing the skills to write for audio and video. Students will contribute stories to the college television newscast and possibly supplement the stories with video.

- **MMS-185 Digital Media Law & Ethics, 3 cr.** An overview of legal theories, principles, and rules governing digital media law. At the end of the course, students will possess a working knowledge of digital media law, including issues relating to First Amendment rights, copyright infringement, intellectual property, defamation, and consumer protection.

- **MMS-211 Advanced Video Editing, 3 cr.** This course takes students past the single-source/cuts-only editing system into advanced editing techniques. Students utilize A/B Roll/multiple source systems in addition to computer based editing systems (non-linear).
MOT-128 Motorcycle Engines Two and Four Stroke, 2 cr.
Construction and design of motorcycle engines, both two- and four-stroke. Correct service procedures, troubleshooting, failure analysis and advanced theory are included. Prerequisite: first semester of program. (Formerly MM-128C)

MOT-129 Motorcycle Eng 2&4 Stroke Lab, 2 cr.
Engine disassembly, reassembly, operation of various motorcycle and ATV engines. Includes adjustment and testing of engines. Prerequisite: First semester of program. Co-requisite: MOT-131

MOT-130 Motorcycle/ATV Tune Up and Maintenance, 2cr.
This course includes tune up procedures for both two and four stroke engines. It will also better prepare them to tune fuel systems. It will also better prepare them to tune fuel systems. Troubleshooting, testing, adjustments and disassembly/reassembly are covered. Proper service procedures are discussed, demonstrated and practiced. Lecture and laboratory. Prerequisite: first two semesters of program.

MOT-131 Motorcycle Engine 2&4 Stroke, 3 cr.
This course includes the construction and design of motorcycle engines, both two and four stroke. Correct service procedures, troubleshooting, failure analysis, and theory.

MOT-132 Advanced Motorcycle Engines, 3 cr.
Advanced design and operation of motorcycle engines. Includes computer usage for testing and diagnosis. Prerequisite: MOT-131

MOT-139 Motorcycle Fuel Systems, 3 cr.
Motorcycle fuel systems including carburetion, fuel injection and oil injection. Troubleshooting, testing, adjustments and disassembly/reassembly are covered. Proper service procedures are discussed, demonstrated and practiced. Lecture and laboratory. Prerequisite: MOT-131

MOT-141 Motorcycle Drive Systems/Chassis/Suspension, 3 cr.
Study of the construction, principles of operation and design of motorcycle drive systems, chassis, and suspension systems. Their importance in the safe operation and control of a motorcycle is discussed. Disassembly, assembly, troubleshooting, and repair of these components are covered.

MOT-144 Ignition/Electrical Systems, 3 cr.
Study of the construction, principles of operation and design of motorcycle ignition and electrical systems.

MOT-146 Public Relations and Marketing, 3 cr.
Public relations methods used for effectiveness and the art of persuasion throughout the organization of corporate communications.

MOT-152 Fundamentals of Electricity, 3 cr.
Basic electrical theory used in the motorcycle and small engine field. Study of Ohm’s Law, electrical symbols, problem solving, types of circuits, usage of a VOM and other electrical test equipment. Lecture and laboratory. Prerequisite: MOT-146

MOT-153 Advanced Electrical Systems, 3 cr.
Study of the construction, principles of operation and design of motorcycle and ATV's.

MOT-154 Advanced Television Production, 3 cr.
Production of pre-scripted programs for the local cable public access station. Students will perform as crew members in various studio productions. Prerequisite: MOT-143

MOT-200 Motorcycle and ATV Tune Up and Maintenance, 2cr.
This course includes tune up procedures for both 2 and 4 stroke Motorcycle and ATV's.

MOT-202 ATV Systems, 3 cr.
Introduction to ATV's and all of their systems.

MOT-203 Motorcycle/ATV Tune Up/Maintenance, 4 cr.
This course includes tune up procedures for both two and four stroke engines. Since it is not only the engines that require maintenance, the maintenance items for Motorcycles and ATVs themselves are also covered in depth.

MOT-211 Adv Drivability & Troubleshooting, 4 cr.
This course will better prepare the student for real life drivability and troubleshooting problems that they will encounter in the field.

MOT-221 Advanced Electrical Diagnosis/Troubleshoot, 4 cr.
This course provides the student with the advanced electrical diagnosis and troubleshooting skills needed to work in the Motorcycle and Small Engine Industry.

MOT-231 Advanced Fuel Systems, 4 cr.
This course will prepare the student to better diagnose, troubleshoot, and tune fuel systems. It will also better prepare them to be able to tune all types of fuel systems to be able to meet emissions standards.

MOT-250 Outdoor Power Equipment, 3 cr.
An introduction to Outdoor Power Equipment.
MOT-255 Performance Engine Tuning, 2 cr.
Performance Engine Tuning as it applies to the Motorcycle and ATV.

MOT-270 Introduction to Diesel, 2 cr.
A study of the basic diesel engine used in small horsepower applications. Diesel fuel systems, turbo charging, diesel engine maintenance, and troubleshooting.

MOT-910 Cooperative Work Experience, 4 cr.
Student is involved in a supervised cooperative work experience in a dealership.

MOT-932 Internship, 2 cr.
On-the-job experience at a motorcycle repair facility as a technician, part and service person, or salesperson. The student is evaluated by the job supervisor and the instructor. Prerequisite: completion of the first year of the program.

Marine Service Technology

MSE-143 Small Engines Theory, 3 cr.
Basic two- and four-stroke engine theory, design and construction. All basic systems are studied, as well as troubleshooting, failure analysis and repair procedures. Service literature, warranties and engine identification are covered.

MSE-146 Small Engines Laboratory, 3 cr.
Complete disassembly and reassembly of modern engines, troubleshooting, failure analysis and proper repair techniques. Hands-on testing and inspection of engine systems. Corequisite: MSE-143.

MSE-147 Introduction to Marine Service, 2 cr.
Course covers basic system operations of boats and off season storage, including how to properly operate a boat, dock and tie up a boat, the purpose of instrument gauges and accessories, marine industry terminology and how to identify various serial numbers. Considerable practice will be provided in properly winterizing boats and personal watercraft for off season storage.

MSE-148 Introduction to Marine Detailing, 1 cr.
This course will cover basic detailing of boats and personal watercraft, to include removal of mild oxidation; wax build up and fine scratches, how to properly restore optimum gloss, especially on dark colors, and how to provide long lasting protection from harmful UV rays. You will additionally learn how to clean and protect teakwood. This course provides practice in basic correct use of a buffer, detail cleaners, waxes, polishes and protectants, how to identify specific problems and possible solutions.

MSE-149 Introduction to Marine Rigging, 2 cr.
This course will cover basic rigging operation of boats and personal watercraft, including how to properly install motors and all necessary wiring, how to properly determine what motor should be installed and how to install gauges, depth finders, stereos and other equipment. The course will also include trailer set up procedures, the purpose of instrument gauges and accessories on boats. Factory service manuals, electronic and paper, will be used to look up parts as you learn marine industry terminology and how to identify various serial numbers on motors.

MSE-150 Shop Management, 3 cr.
In this course, students learn proper shop management procedures including parts ordering, inventory, repair order writing, payroll, employee-employer relations, customer relations and communication skills, sales and service in the service center, warranty procedures on marine products, computerized parts/billing systems and waste management procedures.

MSE-151 Shop Safety and Procedures, 1 cr.
Safe shop practices and procedures, including safe equipment operation, proper tool usage, importance of personal protective gear and how to handle emergency situations.

MSE-152 Drive System Fundamentals, 2 cr.
Introduction to the various types of drives which may be encountered. Construction, operation, maintenance and repair of outdoor power and other systems including transmissions; clutches; belt drives; sprockets and chain drives; and hydrostatic drives. Assembly, disassembly, inspection, troubleshooting and repair of these systems is covered. Lecture and laboratory. (Formerly SM-152C)

MSE-153 Fundamentals of Electricity, 3 cr.
Basic electrical theory used in the small engine and marine field. Study of Ohm’s Law, electrical symbols, problem solving, types of circuits, usage of a VOM and other electrical test equipment. Lecture and laboratory.

MSE-154 Intro to Power Generators, 1 cr.
This course is designed to introduce gasoline and diesel powered electrical generator systems. Students will be introduced to how generators function and how to properly set up and maintain this type of power equipment. Prerequisites: MSE 151

MSE-155 Drive System Fund Theory and Lab, 3 cr.
This course is an introduction to the various types of drives and power delivery systems which will be encountered in the outdoor power equipment industry. Construction, operation, maintenance, and repair of outdoor power equipment, and other systems including transmissions, clutches, belt drives, sprocket and chain drive, hydraulics, and hydrostatic drives. Assembly, disassembly, inspection, troubleshooting, and repair of these systems are also covered. Prerequisites: MSE 143

MSE-158 Snowmobile Systems, 2 cr.
Snowmobile systems including clutches, suspensions, engines, tracks and other components are studied. Proper service techniques, troubleshooting, assembly and disassembly are covered along with a unit on performance work. Lecture and laboratory. (Formerly SM-158C)

MSE-159 Snowmobile Systems, 3 cr.
Snowmobile systems including clutches, suspensions, engines, tracks and other components are studied. Proper service techniques, troubleshooting, assembly and disassembly are covered along with a unit on performance work. Lecture and laboratory. Prerequisite: MSE 151

MSE-164 Marine Engine 2 & 4 Stroke Theory, 2 cr.
Construction and design of two- and four-stroke marine engines. Correct service procedures, troubleshooting, failure analysis and advanced theory are covered. Prerequisite: first semester of program.

MSE-165 Marine Engine 2 & 4 Stroke Theory Lab, 2 cr.
Corresponding lab to Marine Engines Two and Four Stroke Theory. Hands-on testing and inspection of marine engines.

MSE-169 Marine Dr Systems T/L, 3 cr.
This course covers operation and construction of Marine Stern-drives, Inboard Drive Systems and Outboard Gear Cases. Also covered will be disassembly, assembly, inspection, troubleshooting, failure analysis, identification, rebuilding drives, adjustments procedures, advance theory and repair procedures as well as performance testing and propeller theory.
MSE-173  Marine Fuel Systems, 3 cr.
Marine fuel systems including carburetion, fuel injection and oil injection are studied. Troubleshooting, testing, adjustments, assembly and disassembly are practiced. Proper service procedures discussed and demonstrated. Lecture and laboratory. Prerequisites: first two semesters of program.

MST-101  Health and Wellness, 1 cr.
This course will provide self-care techniques to promote wellness for the Massage Therapist profession.

MST-103  Intro to Swedish Massage, 3 cr.
Provides a basic foundation for the courses of study in the Massage Therapy program.

MST-110  Pathology for Massage Therapy, 2 cr.
This course is the study of the nature and causes of disease as related to structure and functions of the body. The massage therapist focus is on maintaining health or a balanced state of physical, emotional, social well-being called homeostasis. The students will be introduced to basic pharmacology terminology with prescriptions medications, recreational drugs, herbs and natural supplements.

MST-113  Kinesiology/Anatomy & Movement for Massage Therapy, 3 cr.
Kinesiology/Anatomy and Movement for Massage Therapy is the study of how Body Movement and its relationship to the musculoskeletal system, its mechanical aspects, and the role it plays in the use of this knowledge for the assessment and design of intervention protocols within the scope of Massage Therapy's practice. This course will include drawing, coloring, and identifying muscles and attachments of specific movements on skeletal picture packets and how it effects movement. Prerequisite: MST-103

MST-121  Reflexology, 1 cr.
This course includes the modality pertaining to zones and reflex areas in the hands and feet. The students will study how the reflexes corresponds to distinct parts of the body.

MST-123  Sport Massage, 3 cr.
This course provides the skills and techniques to be used with athletes and individuals with sport injuries. The student will learn protocols for sports event, maintenance, and assessment using advanced techniques in neuromuscular, myofascial, lymphatic and trigger point.

MST-138  Spa Bodywork, 3 cr.
This course will provide the skills and techniques to be used with Hydrotherapy, Hot Stone therapy, Arnomatherapy, and Spa Therapy. The student will be introduced to the terminology of Asian, Eastern, and Traditional Methods and Bodywork. Students will be able to recognize and locate the major meridians, understand the general characteristics of the five elements, learn the names and qualities of the seven major chakras and recognize the qualities of the three Doshas.

MST-141  Geriatric Massage, 1 cr.
This course will provide the skills and techniques to use with elderly clients.

MST-143  Intermediate Massage, 3 cr.
This course is designed to expand on skills developed in the course Introduction to Swedish Massage. Students will pair up and the classes will consist of hands on applications of body massage techniques.

MST-149  Pregnancy/Infant Massage, 1 cr.
This course will provide the skills and techniques to use with the pregnant and infant clients.

MST-151  Business - Massage Therapy, 1 cr.
An introduction to business practices for the massage therapist as an independent and as an employee. Students will be introduced to business structures and organizations, business plans, bookkeeping, legal records, marketing, professional insurance, financing, and business law. Application of principles of stress reduction and time management will be discussed.

MST-152  Chair Massage, 1 cr.
The course provides professional massage techniques of the head, neck, shoulders, arms, back and hips of a client seated in a special designed chair for massage. The student will be trained to do a highly visible branch of professional massage, which is done in shopping malls, airports, convention centers, supermarkets, and the workplace.
MST-153  Deep Tissue Massage, 3 cr.
This course is designed to expand on skills developed in the Introduction to Swedish Massage and Intermediate Massage. Students will incorporate all massage techniques learned in the past.

MST-159  Ethics - Massage Therapy, 1 cr.
This course assists students to understand and apply the Standards of Practice established by professional massage organizations. The course emphasizes ethical behavior in the massage therapy profession and teaches students to establish professional boundaries and acceptable standards of documentation.

MST-810  Massage Clinic, 1 cr.
This course is designed for classroom lab supervised practical experiences in body massages application. The students will set up appointments for outside individuals to apply techniques for full body massages.

Music-Applied

MUA-101  Applied Voice, 1 cr.
Private applied instruction that provides students the opportunity to develop and refine performing skills.

MUA-119  Class Piano, 1 cr.
Instruction on piano keyboard in a classroom setting. No previous study is required for enrollment in this entry-level course. Pianos are provided for practice and performance.

MUA-120  Applied Piano, 1 cr.
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA-124  Applied Guitar, 1 cr.
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA-126  Applied Strings, 1 cr.
Private applied instruction that provides students the opportunity to develop and refine performing skills on a stringed instrument.

MUA-128  Applied String Bass, 1 cr.
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA-150  Applied Tuba, 1 cr.
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA-152  Applied Bassoon, 1 cr.
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA-154  Applied Clarinet, 1 cr.
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA-156  Applied Flute, 1 cr.
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA-158  Applied French Horn, 1 cr.
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA-160  Applied Oboe, 1 cr.
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA-162  Applied Saxophone, 1 cr.
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA-164  Applied Trombone, 1 cr.
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA-166  Applied Trumpet, 1 cr.
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA-180  Applied Percussion, 1 cr.
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

General Music

MUS-100  Music Appreciation, 3 cr.
Studies the elements and history of music with concentration on critical listening skills. Includes a review of music history; styles; genres; form and content; schools of composers; and social and historical events of the past and present that influence music selections.

MUS-102  Music Fundamentals, 3 cr.
An introduction to the fundamental principles of traditional music, including melody, rhythm, and harmony. Emphasis is on music reading and application to performance. This course will help students prepare for Music Theory I.

MUS-120  Music Theory I, 3 cr.
Studies the fundamental principles of traditional theory including melody, rhythm and harmony. Key signatures, intervals and triads are also included. This is an entry level course for music majors.

MUS-121  Music Theory II, 3 cr.
Continuation of MUS120 which includes diatonic material, cadences, chord progression, inversions, chord spelling and part writing.

MUS-135  Music Theory Lab I, 1 cr.
Introduces the solfeggio system of music reading. Both tonal and rhythmic patterns are included in the sight reading exercises as well as principles of key relationships, intervals and triads.

MUS-136  Music Theory Lab II, 1 cr.
Continuation of principles of key relationships, intervals, triads and improvement of sight reading musical notation. All aspects of rhythmic and melodic structure are studied and practiced.

MUS-140  Concert Choir, 1 cr.
Provides an opportunity for talented singers to rehearse and perform choral music of many styles. There is no required audition.

MUS-145  Concert Band, 1 cr.
A music ensemble which studies, rehearses and performs literature for bands and wind ensembles. There is no required auditions.

MUS-149  Pep Band, 1 cr.
An activity designed to give students the opportunity to experience one of the many facets of college life through performance college events.

MUS-153  Jazz Singers, 1 cr.
Jazz Singers are the college vocal jazz choir. This group provides an opportunity for talented singers to rehearse and perform the close harmonies of vocal jazz repertoire. Auditions are held at the beginning of the fall and spring semesters.
MUS-155 Men's Chorus, 1 cr.
Rehearsal and performance of selected men's chorus selections with concerts and special occasion performances. Open auditions. May be repeated for credit.

MUS-156 Women's Chorus, 1 cr.
Rehearsal and performance of selected women's chorus selections with concerts and special occasion performances. Open auditions. May be repeated for credit.

MUS-166 Jazz Combo Improvisation, 1 cr.
Techniques of improvisation through rehearsal and performance of jazz literature through the jazz combo or small group ensemble.

MUS-170 Jazz Band, 1 cr.
Rehearsal and performance of jazz literature, with an annual tour, concerts and special occasion performances. Open auditions.

MUS-175 Woodwind Ensemble, 1 cr.
Rehearsal and performance of selected woodwind ensemble works with concerts and special occasion performances. Open auditions. May be repeated for credit.

MUS-176 Brass Ensemble, 1 cr.
Rehearsal and performance of selected brass ensemble works with concerts and special occasion performances. Open auditions. May be repeated for credit.

MUS-177 Percussion Ensemble, 1 cr.
Rehearsal and performance of selected percussion works with concerts and special occasion performances. Open auditions. May be repeated for credit.

MUS-178 Handbell Ringers, 1 cr.
Ensemble rehearsal of a wide variety of handbell music and study of the techniques of proper handbell ringing. Auditions are held at the beginning of the fall and spring semesters.

MUS-190 Jazz Improvisation, 1 cr.
Teaches improvisation through various musical styles through combo or small group ensemble. Teaches students the art of instant composition.

MUS-200 Music History I, 3 cr.
A survey of Western music literature through perceptive listening of significant forms and styles of music of Western civilization, from antiquity to the mid-18th century. Emphasis on the compositional and stylistic evolution of Western Music as evidence in the works of selected pivotal composers. Recommended prerequisites: Music Appreciation or Music Theory I.

MUS-203 History of American Music, 3 cr.
History of American Music examines musical development in the United States. This course will study the elements and history of American music with concentration on critical listening skills. Includes a review of American music history, styles, genres, form and content, schools of composers and social and historical events of the past and present that influence music selections. Prerequisite: MUS-121.

MUS-220 Music Theory III, 3 cr.
Continuation of MUS-121 including the study of advanced triadic structure and synthetic scales. Emphasis on analysis.

MUS-221 Music Theory IV, 3 cr.
Continuation of MUS-221.

MUS-235 Music Theory Lab III, 1 cr.
Continuation of principles of key relationships, intervals, triads and improvement of sight reading musical notation. All aspects of rhythmic and melodic structure are studied and practiced. Prerequisite: MUS-136.

MUS-236 Music Theory Lab IV, 1 cr.
Continuation of principles of key relationships, intervals, triads and improvement of sight reading musical notation. All aspects of rhythmic and melodic structure are studied and practiced. Prerequisite: MUS-235.

MUS-250 Musical Play Production, 1 cr.
Production of a musical play. Special attention will be given to singing, acting, set work, props, sound reinforcement and lighting. Open auditions.

Computer Networking

NET-122 Computer Hardware Basics, 3 cr.
How to prepare and evaluate system specifications, troubleshoot minor hardware problems, configure and install hardware, manage memory, modify and use diagnostic software.

NET-140 Networking Essentials, 4 cr.
Foundational training in local area networking technology serving as a general introduction to LANs, WANs and the internet. Topics include IQRs, network interface cards (NIC), cabling (coax, STP, UTP and fiber), ARCNET, network protocols, hubs, routers and bridges.

NET-142 Network Essentials, 3 cr.
Network Essentials introduces the networking field. The course focuses on network terminology and protocols, local area networks (LAN), wide-area networks (WANs), Open System Interconnect (OSI) models cabling, cabling tools, routers, router programming, Ethernet, Internet Protocol (IP) addressing, and network standards. Instruction and training are provided in the proper care, maintenance, and use of networking software tools, and equipment and all local, state, and federal safety, building, and environmental codes and regulations.(3/0)

NET-148 Basic Networking & Computer Technology, 3 cr.
Foundational training in local area networking technology, protocols, and installation procedures. Troubleshooting minor hardware problems, installing hardware, system configuration, and run diagnostics.

Parts Distribution & Inventory Control

PAR-113 Parts Catalog + Lab, 3 cr.
An overview of major automotive parts systems, the reading of parts lists, catalogs, price sheets and exploded views will be covered. Identification of manufacturer and their products. Students will gain hands-on experience in cataloging parts. Lecture and laboratory.

PAR-123 Parts System + Lab, 4 cr.
This course develops skills in the operation of a parts store or automotive dealership parts department. Emphasis is on jobber catalogs, use of computer cataloging, invoice processing and parts sales. Students learn to handle purchase orders, repair requests and monthly statements. Lecture and laboratory.
PAR-124  Inventory Control & Lab, 3 cr.
A study of various inventory control systems used by the after-market industry. Emphasis is on the use of state-of-the-art computer inventory system. Students learn to check inventory, determine slow moving stock, ordering new stock, and arrangement of stock. Lecture and laboratory.

Physical Education Activities

PEA-134  Golf I, 1 cr.
Lecture and laboratory course designed to cover the basic principles and skill techniques involved in golf.

PEC-101  Intro to Coaching, 3 cr.
This four-part course includes coaching theory, sports medicine, sports psychology and sports physiology. It leads to coaching authorization for the State of Iowa as a junior high or senior high coach.

PEC-110  Coaching Ethics, Techniques, & Theory, 1 cr.
Techniques and theory of coaching interscholastic athletics

PEC-115  Athletic Development & Human Growth, 1 cr.
Human growth and development in children and youth in relation to physical activity.

PEC-120  Body Structure & Function, 1 cr.
The structure and function of the human body in relation to physical activity.

PEC-126  Athletic Injury Prevention, 2 cr.
Course provides a knowledge and understanding of the prevention, care and rehabilitation of athletic injuries.

PEC-128  Care & Prevent Athl. Injuries, 3 cr.
Basic recognition, prevention, care and rehabilitation of athletic injuries. Evaluation of protective devices, nutrition and conditioning are included.

PEC-140  Intro to Taping, 2 cr.
Introduction to Taping is an entry level class that will introduce the student to the taping and bracing aspects and skills of the Athletic Training profession. The class will cover the common taping and wrapping techniques needed to become a successful athletic training student and prepare them for transfer into an accredited athletic training education program (ATEP). Students will be tested during class time.

PEC-146  Phys. Fitness I, 1 cr.
Develops an individual wellness program with emphasis on cardiovascular and muscular fitness and provides the student with periodic fitness evaluations.

PEC-194  Weight Training III, 1 cr.
Lecture and laboratory course designed to increase knowledge, understanding and skill techniques involved in weight training.

PEC-246  Physical Fitness II, 1 cr.
Continuation of PEC-146.

PEC-248  Physical Conditioning III, 1 cr.
This course is a continuation of PEC-128. This course will continue to provide the physical fitness skills needed to assist the student in their preparation for the minimum physical fitness requirements in the Criminal Justice field.

PEC-292  Physical Conditioning III, 1 cr.
This course is a continuation of PEC-248. This course will continue to provide the physical fitness skills needed to assist students in their preparation for the minimum physical fitness requirements in the Criminal Justice field.

PEC-294  Weight Training III, 1 cr.
Lecture and laboratory course designed to cover the advanced principles and skill techniques involved in weight training.

Physical Education Training

PEC-105  Basic Athletic Training, 3 cr.
Introduction to the history and development of athletic training as a medical profession. Introduction to methods of athletic training including injury recognition, the prevention and care of athletic injuries and emergency care are studied. Competencies in taping and wrapping techniques are included.

PEC-160  Sports Officiating, 2 cr.
Principles and standards, rules, mechanics and procedures for officiating competitive sports.

PEC-246  Physical Fitness II, 1 cr.
Continuation of PEC-146.

PEC-287  Weight Training II, 1 cr.
Lecture and laboratory course designed to increase knowledge, understanding and skill techniques involved in weight training. Continuation of PEC-187.

PEC-294  Weight Training III, 1 cr.
Lecture and laboratory course designed to cover the advanced principles and skill techniques involved in weight training.

PEC-292  Physical Conditioning III, 1 cr.
This course is a continuation of PEC-248. This course will continue to provide the physical fitness skills needed to assist students in their preparation for the minimum physical fitness requirements in the Criminal Justice field.

PEC-294  Weight Training III, 1 cr.
Lecture and laboratory course designed to cover the advanced principles and skill techniques involved in weight training.

PET-140  Athletic Training Practicum I, 1 cr.
Supervised athletic event and practice coverage as an athletic trainer.

PET-140  Athletic Training Practicum I, 1 cr.
Supervised athletic event and practice coverage as an athletic trainer.
Intercollegiate Physical Education

**PEV-110**  Varsity Baseball, Fall, 1 cr.
Study of basic and advanced fundamentals.

**PEV-115**  Varsity Baseball, 1 cr.
Study of basic and advanced fundamentals as well as participation in intercollegiate baseball.

**PEV-121**  Varsity Basketball, Men, 1 cr.
Study of basic and advanced fundamentals as well as participation in intercollegiate basketball.

**PEV-122**  Varsity Basketball, Women, 1 cr.
Study of basic and advanced fundamentals as well as participation in intercollegiate basketball.

**PEV-140**  Varsity Golf, 1 cr.
Study of basic and advanced fundamentals as well as participation in intercollegiate golf.

**PEV-160**  Varsity Softball, 1 cr.
Study of basic and advanced fundamentals as well as participation in intercollegiate softball.

**PEV-170**  Varsity Volleyball, 1 cr.
Study of basic and advanced fundamentals as well as participation in intercollegiate volleyball.

**PEV-210**  Var. Baseball II, Fall, 1 cr.
Study of basic and advanced fundamentals.

**PEV-221**  Varsity Basketball II, Men, 1 cr.
Study of basic and advanced fundamentals as well as participation in intercollegiate basketball.

**PEV-222**  Varsity Basketball II, Women, 1 cr.
Study of basic and advanced fundamentals as well as participation in intercollegiate basketball.

**PEV-240**  Varsity Golf II, 1 cr.
Study of basic and advanced fundamentals as well as participation in intercollegiate golf.

**PEV-260**  Varsity Softball II, 1 cr.
Study of basic and advanced fundamentals as well as participation in intercollegiate softball.

**PEV-270**  Varsity Volleyball II, 1 cr.
Study of basic and advanced fundamentals as well as participation in intercollegiate volleyball.

**PET-150**  Athletic Training Practicum II, 1 cr.
Supervised athletic event and practices coverage as an athletic trainer.

**PET-171**  Athletic Training Practicum III, 1 cr.
Continuation course for students planning to transfer to an accredited institution for athletic training education. Course is based in the athletic training room where the student continues to complete more advanced competencies.

**PET-181**  Athletic Training Practicum IV, 1 cr.
Exposure to the general working conditions of the Certified Athletic Trainer. Experiences will include a variety of locations and exposure to sports medicine information management and administrative duties of the Athletic Trainer. Course will include an immersion period with a single sport and responsibilities specific to that sport.

**PET-181**  Athletic Training Practicum IV, 1 cr.
Exposure to the general working conditions of the Certified Athletic Trainer. Experiences will include a variety of locations and exposure to sports medicine information management and administrative duties of the Athletic Trainer. Course will include an immersion period with a single sport and responsibilities specific to that sport.

**PET-181**  Athletic Training Practicum IV, 1 cr.
Exposure to the general working conditions of the Certified Athletic Trainer. Experiences will include a variety of locations and exposure to sports medicine information management and administrative duties of the Athletic Trainer. Course will include an immersion period with a single sport and responsibilities specific to that sport.

**PET-181**  Athletic Training Practicum IV, 1 cr.
Exposure to the general working conditions of the Certified Athletic Trainer. Experiences will include a variety of locations and exposure to sports medicine information management and administrative duties of the Athletic Trainer. Course will include an immersion period with a single sport and responsibilities specific to that sport.

**PHI-101**  Intro to Philosophy, 3 cr.
Considers broad fundamental ideas about knowledge, the nature of reality, human nature and society. It is also concerned with words and concepts, their meaning and their logical relationship to each other.

**PHI-105**  Intro to Ethics, 3 cr.
This introductory course examines contemporary ethical conflicts and provides an understanding of the language, concepts and traditions of ethics.

**PHI-114**  Critical Reasoning, 3 cr.
A study of the processes by which we develop and support our beliefs and evaluate the strength of arguments made by others in real-life situations; includes practice in valid reasoning, presentation of arguments, and analysis of the use of language to influence thought.

**PHI 128**  Philosophy of Religion, 3 cr.
An inquiry into the philosophical issues related to religious beliefs and concerns such as the existence and nature of God, the problem of evil, the mind-body problem, and the immortality of the soul, supernatural events, religious experiences, faith and reason, and the meaning of life.

**PHI-903**  History of Philosophy- Travel Tour, 3 cr.
History of Philosophy—Travel Tour is an independent study course designed to provide students not only with appropriate course work (in the form of reading and writing assignments) related to the development of Western Philosophy, but also with an opportunity to travel to geographic locations of philosophical/historical significance (sites such as Athens, Rome, London, and Paris) so they can experience for themselves the physical locations where significant developments occurred.

**PHI-113**  Intro to Physical Science, 4 cr.
A survey of the basic concepts of astronomy and physics, recommended for students who have not had high school physics. Lecture, demonstration and laboratory.

**PHI-142**  Principles of Astronomy, 3 cr.
Studies the latest astronomical discoveries and astrophysical theories.

**PHI-166**  Meteorology Weather Climate, 4 cr.
Introduction to meteorological concepts with emphasis on the characteristics and composition of the atmosphere, weather observations, atmospheric stability and circulation, atmospheric storms, climatology and meteorological applications. Lecture and laboratory.

**PHS-113**  Intro to Earth Science, 3 cr.
Surveys the basic concepts of chemistry, geology and meteorology. Same as the lecture portion of PHS-187.

**PHS-142**  Principles of Astronomy, 3 cr.
Studies the latest astronomical discoveries and astrophysical theories.

**PHS-185**  Intro to Earth Science, 4 cr.
Surveys the basic concepts of chemistry, geology and meteorology. This course is recommended for students who have not had high school chemistry. Lecture, demonstrations and laboratory.
Physics

PHY-162  College Physics I, 4 cr.
Demonstrations, lectures, recitations and laboratory work beginning a two-semester sequence covering the subject. Mechanics is primarily covered during the first semester. Recommended for pre-medical, dental, pharmacy and for liberal arts student interested in the sciences. Prerequisite: An elementary understanding of algebra, trigonometry and geometry from high school.

PHY-172  College Physics II, 4 cr.
Continuation of PHY-162. Thermodynamics, electricity and magnetism are covered in this semester. Lecture and laboratory. Prerequisite: PHY-162.

PHY-184  Applied Physics, 4 cr.
The course will develop the mathematical and analytical techniques required for making accurate computations in applied physics. In parallel an understanding of the applications will be developed through hands on labs. Topics covered will include: systems of units, forces, torques, static equilibrium, kinematics, energy and momentum. Co-requisite: PHY-162.

PHY-212  Classical Physics I, 5 cr.
Demonstrations, lectures recitations and laboratory work beginning a two-semester sequence covering the subject. Mechanics is primarily covered in the first semester. Recommended for those planning to major in engineering, physics, chemistry and mathematics. Prerequisite: Concurrent enrollment or previous course in calculus.

PHY-222  Classical Physics II, 5 cr.
Continuation of PHY-212. Thermodynamics and electricity and magnetism are covered in this course. Lecture and laboratory.

PHY-709  Introduction to Technical Physics, 4 cr.
For students intending technical careers, this course is designed to introduce a variety of physical concepts in one semester. Topics include are measurement, rate of change, linear and non-linear relationships, motion, force, rotation, torque, equilibrium, work, energy, machines, power, momentum, stress, vibrations, waves, fluids, pressure, flow rate, gasses, heat, temperature, thermal properties of matter, heat engines, refrigeration, electrical quantities, and the basics of electrical measurement. Standard physics topics will be reinforced and enhanced with hands-on activities and a variety of applied problems of special interest to the technician.

Practical Nursing

PNN-275  Normal Nutrition, 3 cr.
Provides the student with a basic background of the nutrients essential to maintain the physical and mental well-being of the human body. (Formerly HL-118A)

PNN-662  Practical Nursing II, 7cr.
Practical Nursing II continues to examine the concepts of human needs, the nursing process, and caring. The roles of the practical nurse as (1) provider of care, (2) coordinator of care, and (3) member of the discipline of nursing will continue to be discussed by exploring disease processes and human needs of the adult and older adult.

PNN-663  Practical Nursing III, 4 cr.
Practical Nursing III completes the practical nursing student’s exploration of the concepts of human needs, the nursing process, and caring. The roles of the practical nurse as (1) provider of care, (2) coordinator of care, and (3) member of the discipline of nursing will be concluded by exploring the areas of family nursing and mental health nursing. Concepts of leadership, management, and professional development will be explored. Obtaining licensure, continuing education, and finding employment will be discussed for the practical nursing graduate.

PNN-664  Practical Nursing I, 4 cr.
Practical Nursing I introduces the beginning practical nursing student to the concepts of human needs, the nursing process, and caring utilizing theory and lab practice. The roles of the practical nurse as (1) provider of care, (2) coordinator of care, and (3) member of the discipline of nursing will be explored.

PNN-665  Practical Nursing I Clinical, 1 cr.
Practical Nursing I Clinical will allow the beginning practical nursing student to meet human needs utilizing the nursing process and displaying caring behaviors. The student will demonstrate the following roles (1) provider of care, (2) coordinator of care, and (3) member of the discipline of nursing while caring for stable, noncomplex clients in a long term care setting. P/Q grading.

PNN-666  Practical Nursing II Clinical, 3 cr.
Practical Nursing II Clinical allows the practical nursing student to meet human needs utilizing the nursing process and displaying caring behaviors. The student will demonstrate the following roles (1) provider of care, (2) coordinator of care, and (3) member of the discipline of nursing while caring for stable, noncomplex clients in an acute care setting. P/Q grading.

PNN-667  Practical Nursing III Preceptorship, 2 cr.
Practical Nursing III Preceptorship is designed to assist the student in transitioning into the role of an entry level practical nurse. Students will work with a preceptor to plan, implement, and evaluate care assigned patients in a long term care setting. The student will demonstrate positive communication skills and begin to work as an effective member of the discipline of nursing. P/Q grading.

Political Science

POL-110  Intro Political Science, 3 cr.
A general introductory course in the fundamental concepts, institutions, principles and procedures of political science. Background in classical political theory through exposure to ideas of past political philosophers (such as Aristotle, Machiavelli, Hobbes, Locke, Marx and others). Studies comparative systems through consideration of governments of Great Britain, France and Canada.

POL-111  American National Government, 3 cr.
Review of basic fundamentals of government including federalism, the political process, the presidency, the congress and the judicial system.

POL-112  American State & Local Government, 3 cr.
Course examines the principles and practices of American state and local government as well as applications and case studies in each area.

POL-121  International Relations, 3 cr.
Study of elements of national power and the formulation of foreign policy. Examination of national, state and international politics from 1871 to the present, including international organization, law and future prospects.

POL-125  Comparative Politics & Government, 3 cr.
Survey of the methods, ideologies and main ideas in the field of comparative politics. Introduction to comparative research. Study and comparison of governments and institutions across nation-states.
Psychology

PSY-111 Intro to Psychology, 3 cr.
A survey course which provides an introduction to the study of psychology with emphasis on the history of psychology, learning, personality, behavior, motivation, perception, psychological disorders and their treatment, and social psychology as well as other areas.

PSY-121 Developmental Psychology, 3 cr.
Studies human development from conception through the lifespan. Physical, emotional, social, cognitive and moral aspects are studied in the classroom, by lecture, file/video, projects, and observation and by reading the literature.

PSY-211 Psychology of Adjustment, 3 cr.
Increases student’s knowledge and experiences relating to various populations with disabilities. Adjustment to physical and/or mental disability, conflicting treatment models, impact on self, family, community and society are examined.

PSY-221 Child Psychology, 3 cr.
Covers development from conception to childhood. Emphasis is on child study, growth and development of physiological, motor personality, mental and emotional aspects, sensory and behavior development. Prerequisite: PSY-111 OR PSY-121.

PSY-222 Child & Adolescent Psychology, 3 cr.
This course looks at children from a developmental perspective and reflects how children change as a result of age and experience. Developmental processes are presented in three distinct categories or domains – biosocial, cognitive, and psychosocial.

PSY-223 Adolescent Psychology, 3 cr.
Psychology of Adolescence explores the rapid physical, social, emotional, and cognitive changes of adolescents. Students distinguish myths about adolescence from research findings and examine the importance of cultural and historical factors in this crucial transition from childhood to adulthood. Prerequisite: PSY-111 or permission of the instructor.

PSY-241 Abnormal Psychology, 3 cr.

PSY-251 Social Psychology, 3 cr.
Explores social interaction from both the psychological and sociological perspectives. It is the study of how we think about, relate to, and interact with each other.

PSY-261 Human Sexuality, 3 cr.
Human Sexuality focuses on normal sexual development, human sexual responses, and common sexual problems. It provides factual information on human sexuality and raises practical questions about human sexual behavior. It also helps students examine and evaluate their views and values concerning sexual behavior. Prerequisite: Students must have taken one of the following three courses: PSY-111, SOC-110, SOC-120 or have permission of instructor.

PSY-281 Educational Psychology, 3 cr.
Survey of behavioral theory, classical, operant and vicarious learning. Studies the nature of the learning process, conditions the facilitate learning, problems of learning measurement leading to modern cognitivist concepts, and other variables that affect the learning process.

Reading

RDG-030 Intro to College Reading I, 1 cr.
Individualized reading skill development designed to improve comprehension, vocabulary and reading rate. Preliminary course for RDG-031 for some students based on reading level. P/Q grading.

RDG-031 Intro to College Reading II, 1 cr.
Individualized reading skill development designed to improve comprehension, vocabulary and reading rate. P/Q grading.

RDG-120 College Reading, 1 cr.
An individualized elective course in reading. Prerequisite: RDG-031 or an acceptable assessment score. P/Q grading.

Recreation

REC-114 Foundations of Recreation, 4 cr.
Designed to help the student better understand the role of recreation and leisure in our society. Provides students with information on agencies providing recreational services.

REC-117 Recreation Leadership, 3 cr.
The student will gain an understanding of leadership theories and techniques, along with the developing an understanding of group dynamics as it relates to specific populations in the recreation and leisure practices.

Religion

REL-101 Survey of World Religions, 3 cr.
A survey of the major religions of the eastern and western world. Each is placed in its historical context, and its major tenets are explored. Goals include a general understanding of the various religions studied, some specific insights into each religion's belief structures and discussion of the general function of religion in human experience.

Science

SCI-101 Undergraduate Research in STEM, 2 cr.
Undergraduate research in a STEM area (Science, Technology, Engineering, and Mathematics). A student will choose an interdisciplinary project to work across at least two disciplines. Problem solving in each of the areas is included. Lecture and laboratory. Prerequisite: 1 year of high school science and algebra.

Sign Communication Skills

SCS-101 Basic Sign Language, 2 cr.
Presents students with basic skills in the use and understanding of signed English.

Student Development

SDV-061 Independent Living Skills I, 4 cr.
The purpose of this course is for students to learn to independent adult living skills; first to prepare meals in a safe environment. Students will learn kitchen safety, basic meal planning and serving techniques. Students will learn to follow multi step directions to prepare food in a safe manner.

SDV-065 Personal Management, 3 cr.
This enrichment course will examine concerns faced by students as a member of modern society. It is designed to assist students in making sound decisions concerning physical, mental, and financial health, and to use non-working hours in a creative way. Criti-
Potential, setting goals, and clarifying values.

SDV-075 Strategies for Academic Success, 1 cr.
A human development seminar designed to help individual students increase their academic potential. Behavioral modification techniques are used. The effort is to help the student's behavior become consistent with the student's stated intentions concerning academic work. Access to this course is by referral.

SDV-103 Successful Learning, 1 cr.
Students master the academic and personal skills needed to succeed in higher education and in life. Content will cover academic, communication, and life management skills. Goal setting, time management, note taking, test taking and how to be a lifelong learner will also be covered.

SDV-106 Library Orientation, 1 cr.
This course acquaints students with formation and services found in a library and shows how to use that information. Documentation of sources, plagiarism, and copyright information is included in this course. P/Q grading.

SDV-111 Success Seminar, 1 cr.
The course will examine concerns faced by students as a member of modern society. It is designed to assist students in making sound decisions concerning physical, mental, and financial health, and to use non-working hours in a creative way. Critical thinking skills will be emphasized as students analyze written documents, including those financial, legal, and medical.

SDV-125 Workplace Readiness, 1 cr.
This course is designed to assist students in obtaining and maintaining employment. Topics include making career decisions, using labor market information, developing a portfolio, and demonstrating positive attitudes and behaviors.

SDV-131 Career Exploration, 2 cr.
Students learn about themselves, theories about career, and resources available to assist in the career exploration and decision-making process.

SDV-143 Career Exploration II, 2 cr.
Career Exploration II is a continuation of Career Exploration I. This course will provide students with an opportunity to gain further knowledge about the many different types of careers available. Students will explore career outlook information, educational requirements, job descriptions and essential job search communications. Students will compile documents to create their personal portfolio.

SDV-154 Successful Learning II, 1 cr.
This course helps students expand on mastering intellectual and self-aptitude skills through brain game activities and other exercises that will increase life-long learning and improve brain health and performance.

SDV-173 Introduction to Reasoning, 2 cr.
Introduction to Reasoning is a course that provides students with an opportunity to gain knowledge and skills to help one improve their own behavior as well as the behavior of others. It allows students to gain reasoning, critical thinking, and problem solving skills as well as how to influence others.

SDV-182 Human Potential Seminar, 2 cr.
Positive-oriented group experience emphasizing and realizing potential, setting goals, and clarifying values.

SDV-191 Positive Psychology and Wellness, 3 cr.
This course provides an introduction to the study of topics related to happiness and the positive aspects of human experience and wellness. The first part of the course will focus on the basic areas of research in positive psychology and the ways to apply the research to your own life. The second part of the class will focus on personal wellness and self-care.

SDV-195 Student Government I, 1 cr.
Encouraging academic excellence within the realm of providing social, recreational, educational and cultural activities.

SDV-213 Coop Career Experience, 2 cr.
Students will be given the opportunity to apply real world situations while preparing a meal for college students and members of the college and/or community and to evaluate their experience and observations. Social skills required in various occupational settings will be developed, emphasizing how appropriate personal attitudes lead to business success.

SDV-250 Service Learning, 1 cr.
Offers an opportunity to explore professional and technical aspects within an organization and to reflect on the experience.

Sustainable Energy Resources

SER-101 Energy, Sustainability & the Environment, 3 cr.
Introduction to Sustainable Energy Resources is designed to provide a basic understanding of energy, current trends in energy consumption, and the role of sustainable energy resources in today's society. Topics covered will include matter and energy laws, the history of energy usage by humans, the categories of energy resources, and the environmental problems currently being caused by energy consumption.

SER-107 Sustainable Energy Technologies, 3 cr.
Sustainable Energy Technologies is designed to provide the student with a basic understanding of various technological systems that are capable of producing energy in a sustainable fashion. Topics covered include the technologies of wind energy, biomass energy, solar energy, geothermal, hydropower, and other sustainable energy resources.

SER-111 Intro to Wind Energy Resources, 3 cr.
Introduction to Wind Energy Resources is designed to provide a basic understanding of wind as an energy resource. Topics covered will include the history of wind energy usage; the location, magnitude, and availability of wind energy resources; wind energy technologies; and the economic and environmental issues associated with using wind energy resources.

SER-114 Blueprint Reading, 1 cr.
Fundamentals, principles, and practices involved in producing and reading blueprints utilized in the different sectors of the renewable energy industry with a focus on basic blueprint reading.

SER-116 Career Seminar, 1 cr.
A study of the careers available within the renewable energy sector, with an emphasis on analyzing renewable energy industries as related components of a dynamic system. Students will also learn about drafting cover letters, creating resumes, interviewing, and networking.

SER-117 Estimating for the Trades, 1 cr.
This course presents the skills required to organize and prepare an estimate for a trade’s project.
SER-124 Industrial Safety, 1 cr.
A study of principles and practices used to establish a safe and efficient environment for personnel in the renewable energy industry and various sectors thereof. The course focuses on general industrial safety, safety and health regulatory agencies and organizations, hazard recognition and correction, and first aid.

SER-201 Sustainable Energy Resources Mgt., 3 cr.
Introducing the concepts of natural resources management with an emphasis on sustainable energy resources. Topics covered include basic natural resource management practices; past, present, and future usage and demand of energy resources; the role of sustainable energy resources in current and future energy policies; and the management of sustainable energy resources.

SER-230 Maintenance & Repair of Pumps & Valves, 4 cr.
Maintenance and Repair of Pumps and Valves is designed to provide the student with a basic understanding of the types of pumps and valves used in water processing and wastewater treatment facilities. Topics covered will include the principles of pump and valve usage, the types of pumps and valves found in water processing and wastewater treatment facilities, and pump and valve inspection, maintenance and repair.

Social Media and Marketing

SMM-100 Introduction to Social Media, 3 cr.
Social media surrounds us every minute of every day and even though students may be experts on how to use a variety of these platforms for socialization, their knowledge of utilizing social media in a professional, work-related environment may be lacking. In addition to introducing students to several popular social media sites, this course emphasizes how to use social media platforms to successfully communicate and promote a message in support of a business and/or product. Special attention will be paid to when this type of transmission is most effective, how to select the most effective social media outlet for your particular target demographic and how to measure success of the platform chosen and message.

SMM-110 Writing for the Web, 3 cr.
This course takes a more in-depth look at writing, specifically for the web. Because the web is a primary “go-to” platform for a number of people, the information presented must not only be credible but also attractive with a goal in mind of the creator.

SMM-210 Web Analytics, 3 cr.
This course will explore basic online research principles and then examine two themes: web analytics and social media monitoring. Web analytics reviews the effectiveness of company communications and customer interactions on a range of digital marketing platforms including website, social media presences and mobile marketing. Social media monitoring involves using tools to listen to conversations about a brand across digital platforms and taking appropriate action.

Sociology

SOC-110 Intro to Sociology, 3 cr.
A survey course applying basic sociological concepts, theories, and methods to examine society, culture, cultural institutions, cultural diversity, and cultural stability and change.

SOC-115 Social Problems, 3 cr.
Applies basic scientific sociological concepts and principles to the examination of contemporary social issues such as crime, poverty, violence, and inequality.

SOC-120 Marriage and Family, 3 cr.
The sociological study of the family and family-related issues in cultural, cross-cultural, historical, and social context.

SOC-160 Introduction to Social Work, 3 cr.
An introductory course in social welfare systems and social work practice that surveys the historical development of the social work profession in conjunction with the development of the social welfare services in the United States.

SOC-186 Contemporary Global Issues, 3 cr.
A survey course to identify and analyze the variety and extent of global economic, political, social and cultural problems and issues.

SOC-200 Minority Group Relations, 3 cr.
Survey of the contributions that various minorities have made to the development of the United States.

SOC-220 Sociology of Aging, 3 cr.
Discusses the psychological and societal changes and needs of the elderly. Emphasis is on the effect of, and adaptation to, role changes such as retirement and institutionalization. It also deals with perspectives on adult development in the areas of emotional, cognitive and personality development. Grief, dying, and death, the final stages of the life process are examined from varying points of view.

SOC-890 Service Learning, 1 cr.
The Service Learning field experience offers students a hands-on opportunity to explore professional and technical aspects within an organization. Through this Service Learning project the student must be involved with a meaningful project, have an academic connection, and have an opportunity to reflect on the experience upon its completion.

Speech

Development of the basic skills involved in variety of speaking situations, including oral presentations and interpersonal speaking. Emphasis is placed on organization, voice, articulation, listening, non-verbal communication, critical thinking, and methods of dealing with speech comprehension.

SPC-112 Public Speaking, 3 cr.
This course helps students develop confidence in both professional and personal presentation skills. Topics include audience analysis in both professional and personal presentation skills, critical thinking, organization, effective listening, audience message retention, and the use of visual help. Course requirements include that the student be actively engaged in researching appropriate related material from newspapers, periodicals, or the web. This research will enhance the students learning and develop deeper insights into the course topics. The instructor will define specific course related assignments that require active research efforts as a requirement for successful course completion.

SPC-122 Interpersonal Communications, 3 cr.
Examines how humans communicate in one-on-one situations through personal and professional relationships.
Surgical Technology

SUR-121 Surgical Techniques I, 6 cr.
This course provides the student with an orientation to the surgical technology profession and operating room theory. Principles and concepts of physical environment, aseptic technique, sterilization and disinfection, instrumentation, equipment and supplies and their role in surgical case management along with all other techniques associated with the scrub role are presented. Students will be introduced to the surgical environment during a 16 hour observational experience within a surgical department.

SUR-123 Patient Care Concepts, 2 cr.
This course intends to introduce the student to the practice of surgical patient care. Preoperative and postoperative routines as well as some of the responsibilities of the surgical technologist in the circulating role are discussed. The bio-psycho-social needs of the patient are addressed in addition to patient identification, review of the chart, documentation, surgical transport and positioning, skin preparation, urinary catheterization, specimen care, wound classification, vital signs, hemo-dynamics, monitoring, and discharge planning. The student will learn appropriate response to legal, ethical, and moral issues, as well as emergency situations and personnel safety practices as outlined by OSHA Standards.

SUR-129 Surgical Foundations, 6 cr.
This course provides the student with an orientation to the surgical technology profession and operating room theory. Principles and concepts associated with the professional aspects of surgical technology are presented. Foundational concepts such as the role of the surgical technologist, professional aspects, and medical law will be covered. A theoretical overview will be given for introduction into: the surgical environment, biomedial sciences, aseptic techniques, sterilization and disinfection, instrumentation, equipment and supplies, wound healing and diagnostic procedures. Prerequisite: BIO-163 OR BIO-168, HSC-114. Co-requisite: SUR-131

SUR-131 Surgical Foundations Lab, 4 cr.
This course will allow students to apply principles learned during Surgical Procedures Lecture in a hands-on laboratory setting. Students will further redefne skills related to the three phases of case management as they apply to each surgical specialty and its specific cases.

SUR-223 Surgical Procedures, 6 cr.
This course provides the student with the preoperative theory, procedural anatomy, physiology, pathophysiology, diagnostic interventions, procedural considerations, instrumentation, and steps related to various surgical specialties. Specialties include: diagnostic, general, obstetrics and gynecology, genitourinary, ear, nose and throat, ophthalmic, plastic, orthopedic, peripheral vascular, cardiovascular, neurosurgery. Students will incorporate safe perioperative patient care techniques, medical terminology, and pharmacology to each procedure.

SUR-227 Surgical Procedures Lab, 2 cr.
This course will allow students to apply principles learned during Surgical Procedures lecture in a hands-on laboratory setting. Students will further redefine skills related to the three phases of case management as they apply to each surgical specialty and its specific cases.

SUR-420 Pharmacology for Surgical Tech, 2 cr.
This course reviews basic math and science skills. It provides an introduction to surgical pharmacology and emphasizes the classifications of medications used in surgery. The student will become familiar with the general terminology used with medication application, the use of drugs in the care of surgical patients, and the principles of anesthesia administration for routine cases and emergency procedures.

SUR-430 Microbiology - Surgical Tech, 2 cr.
This course includes the correlation of the relationship to the practice of sterile technique and infection control in the operative setting. The student will use the microscope to contrast and compare the structure and characteristics of microorganisms.

SUR-517 Surgical Procedures Practicum 1, 3 cr.
This practicum application provides the student the opportunity to apply classroom theory learned in the first and second semesters in a hospital operating room.

SUR-519 Surgical Technology Practicum, 4 cr.
This course is provides students the opportunity to attend practicum rotations in the various surgical specialties while scrubbing a variety of perioperative cases to build skills required for complex perioperative patient care. Emphasis is placed on improving their technical skills, critical thinking, speed, efficiency, and autonomy in the operative setting. The latter portion of this course provides the student with an opportunity to scrub in specialty areas as the primary surgical technologist. Students will gain expertise in sterile technique, improve their anticipation of surgeon’s needs, and further increase their dexterity and speed. Emphasis is placed on preparing students for transition into the job market.

Welding

WEL-114 Introduction to Fabrication, 3 cr.
Designed to develop the skills for welding, fabrication, sheet metal fields. To practice operation of tools, such as lathes, milling machines, borers, grinders, and drill presses. To gain knowledge of metals; read and interpret blueprints and develop sketches, perform layouts, and generate specifications for where and how to machine metal. Selecting the correct tools, materials and using precision measuring devices to produce quality parts.

WEL-121 Oxy Fuel Welding & Cutting, 4 cr.
Oxy-acetylene welding in correlation with identification of metals; care and use of welding equipment; selection of rods and fluxes; and safety. Lecture and laboratory. (Formerly WE-111C)

WEL-128 Brazing / Soldering, 2 cr.
Identification of metal and what filler is needed to join these materials. Prerequisites: WEL-121 and WEL-160

WEL-158 Structural Weld, 4 cr.
Designed to develop techniques required to properly weld structural steel and pass the AWA certification examination. Lecture and laboratory. Prerequisites: WEL-121 and WEL-160.

WEL-160 Arc Welding I (SMAW), 5 cr.
Safety factors and practices relating to welding machines, electrodes and positions used in arc welding. Lecture and laboratory.

WEL-179 Special Processes/Procedures, 3 cr.
Ferrous to ferrous, nonferrous to nonferrous hard surfacing used in the welding field today. Lecture and laboratory. Prerequisites: WEL-121 and WEL-160.

WEL-180 GMAW/GTAW, 2 cr.
Studies the necessary fundamentals of the metallic inert gas and tungsten gas processes.
WEL-183 GMAW/GTAW, 3 cr.
Studies MIG and TIG welding in correlation with the use of equipment, variables, safety and data for welding metals. Prerequisite: WEL-180.

WEL-228 Introduction to Welding, Safety and Health of Welders, 1 cr.
This course will provide students with orientation to the welding profession and will cover the basics of safety & health within the welding profession. This course aligns to SENSE Level 1, Module 1 and Module 2 – Key Indicators 1-6.

WEL-233 Print Reading and Welding Symbol Interpretation, 3 cr.
Provides instruction in interpreting elements of welding prints (drawings or sketches), focusing on measurement, American Welding Society welding symbols, and fabrication requirements. Students will understand how to prepare, assemble and tack welding parts according to drawings or sketches, using proper materials and tools. This course aligns to SENSE Level 1 Module 3: Drawing and Welding Symbol Interpretation, Key Indicators 1 and 2.

WEL-244 Gas Metal Arc Welding Short Circuit Transfer, 2 cr.
Focuses on proper weld safety, machine setup and welding techniques of Gas Metal Arc Welding Short-Circuiting Transfer. Students perform American Welding Society compliant welds on carbon steel, in flat, horizontal, vertical and overhead positions. This course will prepare students to take an AWS welder certification test, which is recommended. This course aligns with SENSE Level 1 Module 5 Key Indicators 1-7.

WEL-245 Gas Metal Arc Welding Spray Transfer, 2 cr.
Focuses on proper weld safety, machine setup and welding techniques of Gas Metal Arc Welding Spray Transfer. Students perform American Welding Society compliant welds on carbon steel in flat and horizontal positions. This course will prepare students to take an AWS welder certification test, which is recommended for its successful completion. It aligns with SENSE Level 1 Module 5 Key Indicators 1, 2 and 8-12, as well as Module 2 - Key Indicator 7, Module 3- Key Indicator 3, and Module 9 – Key Indicator 2.

WEL-251 Gas Tungsten Arc Welding for Carbon Steel, 2 cr.
Focuses on proper weld safety, machine setup and welding techniques for Gas Tungsten Arc Welding. Students perform American Welding Society compliant welds on carbon steel in flat, horizontal, vertical and overhead positions. This course will prepare students to take an AWS welder certification test, which is recommended for successful completion of this course. This course aligns to SENSE Level 1, Module 7 – Key Indicators 1-7, as well as Module 2 - Key Indicator 7, Module 3- Key Indicator 3, and Module 9 – Key Indicator 2.

WEL-252 Gas Tungsten Arc Welding for Aluminum, 1 cr.
Focuses on proper weld safety, machine setup and welding techniques for gas tungsten arc welding. Students perform American Welding Society compliant welds on aluminum in flat and horizontal positions. This course will prepare students to take an AWS welder certification test, which is recommended for successful completion of this course. This course aligns to SENSE Level 1, Module 7 Key Indicators 1, 2 and 13 – 17, as well as Module 2 - Key Indicator 7, Module 3- Key Indicator 3, and Module 9 – Key Indicator 2.

WEL-253 Gas Tungsten Arc Welding for Austenitic Stainless Steel, 1 cr.
Focuses on proper weld safety, machine setup and welding techniques for Gas Tungsten Arc Welding. Students perform American Welding Society compliant welds on austenitic stainless steel in flat, horizontal, and vertical positions. This course will prepare students to take an AWS welder certification test, which is recommended for successful completion of this course. This course aligns to SENSE Level I, Module 7 Key Indicators 1, 2 and 8-12 as well as Module 2 - Key Indicator 7, Module 3- Key Indicator 3, and Module 9 – Key Indicator 2.

WEL-254 Welding Inspection and Testing Principles, 1 cr.
Students will visually examine test weldments and thermally cut surfaces per multiple welding codes, standards, and specifications. This course aligns to SENSE Level I, Module 9: Welding Inspection and Testing Principles.

WEL-274 Shielded Metal Arc Welding I, 3 cr.
Focuses on safety, amperage settings, polarity and the proper selection of electrodes for the shielded metal arc welding process. Students will perform American Welding Society compliant welds on carbon steel, using visual and destructive methods for determining weld quality. This course aligns to SENSE Level 1 Module 4 - Key Indicators 1-7 for the flat and horizontal positions, as well as Module 2 - Key Indicator 7, Module 3 - Key Indicator 3, and Module 9 - Key Indicator 2.

WEL-275 Shielded Metal Arc Welding II, 3 cr.
Focuses on safety, amperage settings, polarity and the proper selection of electrodes for the Shielded Metal Arc Welding (informally known as stick welding) process. Students perform American Welding Society compliant welds on carbon steel, in vertical up and overhead configurations, using visual and destructive methods for determining weld quality. This course aligns to SENSE Level 1 Module 4: Shielded Metal Arc Welding Key Indicators 1-7 for the flat and horizontal positions, as well as Module 2 - Key Indicator 7, Module 3- Key Indicator 3, and Module 9 – Key Indicator 2.

WEL-310 Pipe Welding, 5 cr.
Develops the exacting techniques required to properly weld pipe installations. Lecture and Laboratory. Prerequisites: WEL-160, WEL-180, WEL-183.

WEL-334 Trade & Industry Welding, 2 cr.
Principles and applications of gas and MIG welding theory, safety and shop practices are covered. Lecture and laboratory.

Wind Energy & Turbine Technology

WTT-103 Introduction to Wind Energy, 3 cr.
Introduction to Wind Energy students will be exposed to the many facets of the wind industry. This course will cover the history and development of the wind industry, terminology used in the industry, types and applications of various wind turbines, environmental and economic issues of the wind industry, the future of the wind industry, other topics that are appropriate. (Formerly WT-103C)

WTT-104 Introduction to Wind Energy, 4 cr.
Introduction to Wind Energy students will be exposed to the many facets of the wind industry. This course will cover the history and development of the wind industry, terminology used in the industry, basic tools and techniques, wind turbine components, the future of the wind industry, and other topics that are appropriate.
WT114 Field Training and Project Operation, 5 cr.
Field Training & Project Operations will introduce the 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. (Formerly WT-114C)

WT115 Field Training & Project Operation, 4 cr.
Field Training and Project Operations 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 sites to gain perspectives on day-to-day operations of wind turbine generation facilities.

WT126 Basic Hydraulics, 3 cr.
This course will introduce students to the basic structure and application of hydraulics. Students will also learn how to read hydraulic schematics and troubleshoot basic hydraulic components.

WT133 Wind Turbine Mechanical System, 3 cr.
Wind Turbine Mechanical Systems will introduce the students to gearboxes and other mechanical systems that make up subsystems of today's wind turbine.

WT134 Electric Motors & Generators, 4 cr.
Electric motors and generators is an introduction to types of motors and generators that are used today. The characteristics of Direct Current and Alternating Current motors and generators will be discussed and demonstrated through lecture and hands on laboratory sessions.

WT204 Wind Turbine Siting, 4 cr.
This course will allow students the opportunity to learn the techniques, methodology, and concepts used to develop projects around the world.

WT206 High Voltage Awareness & Fall Rescue Saf., 1 cr.
Students will learn industry standards of wind turbine rescue and high voltage procedures. Students will also be evaluated in practical exams on power transmission and site safety. Prerequisites: All WTT-100 level courses or permission of program coordinator.

WT214 Basic Networking/Comp Tech, 3 cr.
Foundational training in local area networking technology, protocols, and installation procedures. Troubleshooting minor hardware problems, installing hardware, system configuration, and running diagnostics.

WT216 Power Generation & Transmission 3 cr.
Power Generation and Transmission will serve as an introduction to the generation of electrical power with a wind turbine generator, moving that power through a local transmission system to a substation where a customer will purchase the generated power. This course will cover all aspects of working with components of a high voltage transmission system.

WT223 Airfoils and Composite Repair, 3 cr.
Airfoils and Composite Repair will enable the student to more efficiently inspect, repair and move/transport wind turbine blades. Students will understand common industry terms used in the manufacture and repair of wind turbine blades. Prerequisite WTT-103. (Formerly WT-223C)

WT225 Data Acquisition & Assessment, 4 cr.
This course will give students an understanding of how wind data is collected and analyzed for electric power generation. Students will also learn how to assess the operation and power production of individual wind turbines.

WT235 Programmable Logic Control Systems, 4 cr.
This course will introduce students to Programmable Logic Controllers (PLC's), primarily the Allen Bradley SLC 500 line of processors.

WT244 Alt Current Elect Theory II, 4 cr.
Alternating Current Electrical Theory II will consist of instruction that will build upon experience gained in Direct Current Theory and Alternating Current Theory I. Students will be introduced to advanced concepts of electrical theory.

WT245 Electrical Practical Application, 4 cr.
Electrical Practical Applications will provide students with practical wiring exercises involving installation, wiring, and troubleshooting of electrical devices and equipment used in, but not specific to, wind turbine control systems. Students will study electrical diagrams, design of electrical systems, and electrical safety.

WT250 Basic Electronics, 4 cr.
Students will learn about analog and digital electronics at basic level of familiarization with the semiconductor devices and their functions. The course focuses on applications and apparatuses used in wind turbine technology. The course is accompanied by laboratory work. Prerequisites: WTT-118, WTT-123, WTT 244

WT932 Internship, 5 cr.
The wind turbine internship will give students the opportunity to apply skills developed during the first two semesters of the Wind Energy and Turbine Technology program.

WT934 Wind Energy and Turbine Technology Internship II, 4 cr.
Students will complete job contact experience in their field of choice. A minimum of 288 job contact hours is required by this 4-credit course.

WT946 Wind Energy and Turbine Technology Internship I, 6 cr.
Students will complete job contact experience in their field of choice. A minimum of 432 job contact hours is required by this 6-credit course.

WT950 Wind Energy & Turbine Technology Seminar, 2 cr.
The seminar will explore current trends, issues, and companies related to the area of study. Students will have the opportunity to research one of these aspects to enhance their understanding of the implications and impact the industry has on their personal and societal goals.
BOARD OF TRUSTEES

Janice K. Lund, President, District 2, Estherville
Pat Kibbie, Vice President, District 6, Emmetsburg
Todd Johnson, District 5, Milford
Robert Jennings, District 7, Algona
Christopher Fuhrman, District 3, Spirit Lake
Jane Nolan Goeken, District 4, Spencer
Arden Kinnander, District 1, Armstrong

PRESIDENT’S CABINET

Valerie Newhouse (1998)
President
B.A., Buena Vista University; M.A., University of Iowa

Thomas Brotherton (2003)
Executive Dean, Emmetsburg Campus
B.A., University of Iowa; M.A., University of Nebraska-Omaha

Jane Sewell Campbell (1994)
Executive Director of Marketing
B.A., University of Northern Iowa

Delaine Hiney (1992)
Executive Director of Facilities Management
A.A., Iowa Lakes Community College; B.A., Briar Cliff College;
M.B.A., Colorado State University

Robert Leifeld (2014)
Executive Dean, Estherville Campus
M.Ed., Iowa State University

Kathy Muller (1979)
Executive Director of Human Resources
A.A.S., Iowa Lakes Community College

Jolene Rogers (2000)
Executive Director of Business & Community Relations
A.A., Iowa Lakes Community College; B.A., Buena Vista University;
M.B.A., Southwest Minnesota State University

Jeff Soper (2011)
Chief Financial Officer
A.S., Iowa Lakes Community College; B.S., Iowa State University

Position Open (2017/18)
Vice President of Administration

Julie Williams (1985)
Executive Dean of Students
B.A., Mankato State University; M.A., University of Iowa

ADDITIONAL ADMINISTRATIVE STAFF

Trudy Strain-Ahrens (1997)
TRIO Director
B.A., Iowa State Univ; M.S., Southwest Minn State Univ

Randy Beernink (1983)
Computer Center Director
B.A., Northwestern College; B.A., University of Iowa

Jeremiah DePyper (2005)
Director of Technology
A.A., Iowa Lakes Community College;
B.A., Buena Vista University;
M.B.A., Ashford University

Mary Faber (1995)
Spencer & Spirit Lake Campus Director
B.A., University of Northern Iowa; M.A., University of Iowa

Barb Grandstaff (1988)
Director of Registration & Records
B.A., Drake University; M.S., Iowa State University

Kari Hampe (1994)
Secondary Programs Director
B.S., Northwest Missouri State University;
M.S., Southwest State University

Annie Kalous (2014)
Director of Auxiliary Services
B.A., Luther College

Bill Lapczenski (1983)
Director of Facilities Management
A.A.S., Iowa Lakes Community College

Troy Larson (2007)
Athletics Director/ Men’s Head Basketball Coach/
Housing Director
A.A., Iowa Lakes Community College; B.S., Morningside College;
M.B.A., University of South Dakota

Daniel Lutat (2010)
Director of Sustainable Energy Resources & Technology
A.A., Community College of the Air Force; B.S., Bellevue University;
M.S., Bellevue University

Greg McDonald (2016)
Building and Grounds Manager

Matt Pannkuk (2016)
Director of Libraries
B.A., Central College
M.S., University of Kentucky

Stephen Pelzer (1998)
Director of Financial Aid
B.A., University of Northern Iowa; M.B.A, Southwest Minnesota
State University

Jack Vedder (1998)
Building and Grounds Supervisor

FACULTY AND PROFESSIONAL STAFF

Cody Alesch (2012)
Head Wrestling Coach / College Completion Specialist
B.A., Wartburg College

Miranda Anderson
Swimming & Diving Head Coach/Enrollment Coach
M.B.A., University of the Southwest

Carol Ayres (1988)
Instrumental Music Professor/ Jazz Band Director
B.A., Buena Vista University; M.Mus.Ed., University of South Dakota

Jennifer Bennett-Finn (2014)
B.A., J.D., Drake University
Lecia Berven (1998)
Accounting Specialist Professor/Coordinator
A.A., Iowa Lakes Community College; B.A., Mankato State
University; B.A., Buena Vista University; M.B.A., Regis University-
Denver

Matthew Bohl (2000)
Powersports & Power Equipment Technology Assistant Professor/
Coordinator
Diploma, Iowa Lakes Community College

Daniel Bredeson (2001)
Farm Equipment and Diesel Technology Program
Instructor/Coordinator
Diploma, Western Montgomery Vocational Tech School,
Limerick, Pa.

Rick Brichta (2002)
Marine Services Technology Instructor
Diploma, Iowa Lakes Community College

Brian Bristow (2007)
Science-Associate Professor
B.S., M.S., Iowa State University

Teresa Brooks (2011)
Associate Professor, Nursing
R.N., University of South Dakota; B.S.N., Mount Marty College
M.S.N., Walden University

Mari Miller-Burns (1999)
Speech Communication Professor
B.A., Concordia Lutheran College; M.A., University of Northern
Iowa; Secondary Education Licensure, University of Iowa

Rosemary Coleman (2003)
Continuing Education Health Programmer
A.A., Iowa Lakes Community College;
B.A., Buena Vista University

Jody Condon (2013)
Assistant Professor, Educational Counselor;
B.A., Buena Vista University; M.S., Southwest State University;
M.A., Buena Vista University

Tony Condon (2012)
Institutional Advancement Manager/Board Secretary

Valerie Curry (2010)
Medical Assistant/Medical Office Technology Program Assistant
Professor/Coordinator
Diploma, Spencer College; A.S., Iowa Lakes Community College;
B.A., Buena Vista University

Larry Danielson (1986)
Automotive Technician Professor/Coordinator
Diploma, Lincoln Tech; B.A., Buena Vista University; M.A., Colo-
rado State University

Miranda DePyper (2016)
Emergency Medical Services, Fire and Health Services
Programmer
LPN Certificate, Iowa Lakes Community College
Paramedic Specialist A.A.S, Iowa Lakes Community College
Associate Degree Nursing A.A.S, Iowa Lakes Community College

David DeVary (2007)
Computer Specialist Program Assistant Professor/Coordinator
B.A., Iowa State University

Lora Devereaux (2006)
Communications Associate Professor
B.A., Buena Vista University; M.A., Minnesota State University

Kelly Dodge (2013)
Instructor, Agriculture
AAS; Iowa Lakes Community College

Ronald Duer (1999)
Aviation/Airport Management Program Chief Flight Instructor
Assistant Professor/Co-Coordinator
A.A., Iowa Lakes Community College

Don Edwards (2014)
Heating, Ventilation & Air Conditioning Technology Instructor

Kerry Erickson (1999)
Hotel and Restaurant Management Professor
B.A., Mankato State University; M.S., Southwest State University

Nicole Evans (2001)
SAVE Program Professor
B.A., Buena Vista University; M.A., Morningside College

Sonja Fagre (2007)
Criminal Justice Program Assistant Professor/Co-Coordinator
B.S. University Of Central Missouri

Kevin Fehr (1994)
Industry Training Programmer
A.A.S, Iowa Lakes Community College

Brett Fuelberth (1997)
Vocal Music Professor/Choir Director
B.F.A.E., Wayne State College; M.M., University of Missouri

Miranda Gebhart (2005)
Practical Nursing Professor
A.D.N., Western Iowa Tech Community College; B.S., Iowa State
University; M.S.N., Univ of Phoenix

Michael Gengler (2013)
Instructor/Coordinator Wind Energy and Turbine Technology
A.A.S, Iowa Lakes Community College

Janet Gentle (2005)
Massage Therapy Assistant Professor

Christopher Gerstbrein (2012)
Criminal Justice Assistant Professor
M.A.; Ashford University

Emily Gottsche
Instructor/Coordinator, Welding Program
Diploma, Iowa Lakes Community College

Dana Grafft (2002)
Surgical Technology Assistant Professor
Certificate, Western Iowa Tech

Kevin Grems (2011)
Web Development and Design Assistant Professor/Coordinator
A.A., Iowa Lakes Community College; B.A., University of Iowa

Jesse Grossnickle
Instructor, Hotel/Motel Restaurant Management
A.A.S., Iowa Lakes Community College

Sharon Hackenmiller (2004)
Social Science Professor
B.A., M.A., University of Northern Iowa

Ryck Hale (1995)
Physical Education Professor
A.A., Iowa Lakes Community College; B.A., Sioux Falls College;
M.P.E., University of Nebraska, Lincoln
Traci Hansen (2011)
Nursing Associate Professor
A.D.N. Iowa Lakes Community College; B.S.N. University of Iowa, M.S.N., Walden University

Cutberto Hernandez (2014)
Enrollment Coach
B.S., DeVry University

Martin Hilberg (2011)
Math Associate Professor
B.A., Clarke University; M.S., University of Iowa

Laura Hoffman (2017)
Grant Writer
B.A.S.W, Wartburg College; M.S.W., Univ. of Connecticut

Kendra Hough (2009)
High School Partnership Coordinator
A.A., Iowa Central Community College;
B.A., Buena Vista University; M.Ed., Iowa State University

Drew Howing (2016)
Instructor, Environmental Studies
A.S., Iowa Lakes Community College
B.S., South Dakota State University

Johnny Hurley (2005)
Business Professor
A.A., Iowa Lakes Community College; B.A., Buena Vista University; M.S. Emporia State University

Gavin Ilg (2011)
Parts Department Coordinator
A.S., Iowa Lakes Community College

Auto Technician Program Assistant Professor/Coordinator
A.A.S., Iowa Lakes Community College

Renee Jedlicka (1989)
Communications Professor
B.A., Loras College; M.A., Mankato State University

Holly Jensen (2010)
Nursing Associate Professor
B.A., Luther College, M.S.N. Nebraska Methodist College

Mark Jensen (2013)
Instructor, Agriculture Technology
B.S., Iowa State University

Debra Jones (1982)
Office Specialist Professor/Coordinator
B.S., M.S., Mankato State University

Jan Kamies (1996)
Success Center Associate Professor
B.A., Northwestern University; M.A., Morningside College

Erica Killian (2010)
Physics Associate Professor
B.A., Saint Olaf College; M.S., University of Maine

Bob Klepper (1997)
Science Professor
B.S., Buena Vista University; M.S., Iowa State University; Ph.D., Columbia Pacific University

Troy Kleve (2006)
Farm Equipment and Diesel Technology Program Instructor/Coordinator
A.A.S., Iowa Lakes Community College

Planning and Development Grant writer
B.S., Northwest Missouri State University

Michelle Kogel (2005)
Save Program-Professor/Coordinator
B.S., Iowa State University; M.S., Univ of Nebraska at Kearney

Byron Lindell (1997)
Art Professor
A.A., Iowa Lakes Community College; B.F.A., M.A., Mankato State University

Kendra Lindloff (2013)
Director of Nursing
B.S.N., University of Iowa; M.S.N., Indiana University

Annette Lindquist (2011)
Veterinary Technician Instructor
A.S., University of Minnesota at Waseca

Patrick McCoy (1997)
Wind Energy Turbine Technology Associate Professor
B.S., Northwest Missouri State University

Jason McKinney (2011)
Assistant Men's Basketball Coach/Enrollment Coach
B.S., Iowa State University; B.A. St Ambrose; M.S. Iowa State University

Corey Menning (2003)
Construction Technology Assistant Professor/Coordinator
A.A.S., Iowa Lakes Community College

Laure Miller (2006)
Nursing Assistant Professor
B.A., University of Kansas

Bryan Nelson (1998)
Secondary Broadcast Media Program Associate Professor/Coordinator
B.A., University of Kansas

Stephanie Nelson (2014)
Special Needs Assistant Professor
A.A., Iowa Lakes Community College; B.A., BV University; M.A., South Dakota State University

Michael Nichols (1993)
Spanish/English Professor
B.A., M.A., University of Northern Iowa

Lori Nielsen (1999)
Special Needs Facilitator
B.S., Mankato State University; M.S.E., Southwest State University

Kyle Norris (2005)
Science/Athletic Training Professor/Coordinator
B.S., South Dakota State University; M.S., Indiana University

Martha Olson (1999)
Nursing Professor
B.S.N., University of Iowa; M.S., Southwest State Univ.; M.S.N. Walden University; D.N.P., Walden University
Joseph Pavlovich (2015)  
Head Baseball Coach/Housing Coordinator  
M.A., ISU

Cynthia Peters (2011)  
Nursing Associate Professor  
BSN, University of Iowa; Masters Adult Education and Training, University of Phoenix

Dave Petrick (1999)  
B.A., Concordia

Tom Quastad (2009)  
Agriculture Assistant Professor  
A.A., Iowa Lakes Community College; B.S., Mankato State University

Melissa Regelstad (2009)  
Child Care and Early Childhood Associate Professor  
A.A., Iowa Lakes Community College; B.A., Buena Vista University; M.A., Southwest Minnesota State

Lisa Reiman (2016)  
Secondary Health Science Instructor  
A.D.N., Iowa Lakes Community College  
B.S.N., Chamberlain College of Nursing

Denise Reimer (1987)  
Sales and Marketing Management Professor/Coordinator  
A.A.S., Iowa Central Community College; B.A., University of Northern Iowa; M.S., Drake University

David Rentschler (2011)  
Veterinarian Technology Program-Associate Professor/Coordinator and Veterinarian of Record for the College  
B.A., Southwestern State University; M.S., Southwest Minnesota State; DVM Iowa State University

Dustin Ross (2010)  
Powersports & Power Equipment Technology Assistant Professor  
A.A.S, Iowa Lakes Community College

Michelle Rubel (2011)  
Mathematics Associate Professor  
B.A., University of Northern Iowa; M.A., University of Northern Iowa

Gary Schmidt (2000)  
Industry Training Programmer  
B.A., University of Northern Iowa

Laurie Schmidt (2014)  
Professor, Success Center  
B.S., Northwestern College; M.A., University of Iowa; Ph.D., Colorado State University

Rob Schultz (2004)  
Auto Collision Technology Assistant Professor/Coordinator  
Diploma, Iowa Lakes Community College

Abigail Sedlacek (2011)  
English Assistant Professor  
B.A., University of Nebraska; M.A., University of California

Joseph Steele (2007)  
Science Associate Professor  
B.S., University of South Dakota; M.A., Iowa State University

Matthew Strom (2010)  
Math Professor  
B.A., Minnesota State University; M.A., Kaplan University

Molly Struve (2007)  
Success Center Assistant Professor  
A.A., Iowa Lakes Community College; B.A., University of Northern Iowa; M.Ed., Iowa State University

Anthony Stubbs (1989)  
Communications Professor  
B.A., Loras College; M.A., Mankato State University

Doug Sutton (2013)  
Campus Stores Manager  
B.A., Warner Southern College; M.A., Anderson University

Chad Tischer (2016)  
Engineering Technology Instructor/Program Coordinator  
A.A., Iowa Lakes Community College  
B.A., Minnesota State University at Mankato

Amy Ver Mulm (1997)  
Human Services/Disability Studies-Professor/Coordinator  
M.S., Southwest State University

Theresa Waechter (1994)  
Algonia Campus Advisor/Supervisor  
A.S., NIACC; A.A., Iowa Lakes Community College; B.A., Briar Cliff University; M.Ed., Iowa State University

Jeremy Ward (2012)  
Housing Coordinator  
B.S., Iowa State University; M.S., Iowa State University

Jarvis Weber (2011)  
Head Golf Coach/Enrollment Coach  
B.A., Buena Vista University  
M.A., Iowa State University

Adult Literacy Programmer  
A.A., Iowa Lakes Community College; B.A., Buena Vista University

Neal Williamsen (1995)  
Director of Ag. Production & Operations  
B.S., University of Nebraska, Lincoln; M.S., Iowa State University

Annette Wimmer (1985)  
Institutional Assessment/Business Professor  
B.A., M.S., University of Wisconsin-Stout

Mark Zabawa (2009)  
Chemistry/Biology Assistant Professor  
B.S., Johns Hopkins University; M.S., Northern Illinois University; M.S. Pharmacology, Johns Hopkins School of Medicine

Doug Zemler (2008)  
Electrical Technology Assistant Professor/Coordinator  
A.A.S, Southwest Community Technical College
2017 FALL SEMESTER
August 11, 14, 15, 16  Official Registration Days*
August 16  Faculty Return
August 17  Offices closed until 1:00 p.m. for fall staff inservice
August 21  Orientation for Freshmen
August 22  All Classes Begin, Day and Evening
September 4  Holiday, No Classes, Offices Closed
October 13  No Classes, Offices Open
November 22  No Classes, Offices Open
November 23, 24  Holiday, No Classes, Offices Closed
December 7 – 13  Final Exams (Begin 4:30 p.m. on December 7)
(Weather make-up on 14th)
December 15  Last Day of Semester
December 25 – January 1  All College Offices Closed

2018 SPRING SEMESTER
January 2 – 9  No Classes, Offices Open
January 4, 5, 8, 9  Official Registration Days*
January 9  Faculty Return
January 10  First Day of Classes
January 15  Holiday, No Classes, Offices Closed
February 16  No Classes, Employee Inservice
March 12 – 16  Spring Break, Offices Open
March 30  Holiday, No Classes, Offices Closed
April 2  No Classes, Offices Open
May 7 – 10  Final Exams
May 11  Last Day of Semester/Commencement

2018 SUMMER TERM
Vocation/Technical/Career Option  Schedule will vary by program and will be published by the Executive Deans’ offices
May 28  Holiday, No Classes, Offices Closed
July 4  Holiday, No Classes, Offices Closed

First Arts & Sciences Summer Session
May 17, 18  Official Registration Day*
May 21  First Day of Classes
May 28  Holiday, No Classes, Offices Closed
June 21  Last Day of First Session

Second Arts & Sciences Summer Session
June 22, 25  Official Registration Days*
June 26  First Day of Classes
July 4  Holiday, No Classes, Offices Closed
July 27  Last Day of Second Session
July 27  Summer Commencement

* For students not preregistered. This calendar is subject to change.
<table>
<thead>
<tr>
<th>Campus</th>
<th>Address</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algona</td>
<td>2111 Highway 169 North</td>
<td>515-295-9455</td>
<td>515-295-5729</td>
</tr>
<tr>
<td>Emmetsburg</td>
<td>3200 College Drive</td>
<td>712-852-2604</td>
<td>712-362-8365</td>
</tr>
<tr>
<td>Estherville</td>
<td>300 South 18th Street</td>
<td>712-362-2604</td>
<td>712-362-8365</td>
</tr>
<tr>
<td>Spencer</td>
<td>Gateway North</td>
<td>712-262-7141</td>
<td>712-262-4047</td>
</tr>
<tr>
<td>Spirit Lake</td>
<td>800 21st Street</td>
<td>712-336-3439</td>
<td>712-336-1357</td>
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