# 2021-2022

## COURSE CATALOG

IOWA LAKES
COMMUNITY COLLEGE

iowalakes.edu

Non-Discrimination Statement:
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, 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.).

If you have questions or complaints related to compliance with this policy, please contact Kathy Muller, Equity & Title IX Coordinator, 19 South 7th Street, Estherville, IA 51334, 712 .362 .0433, kmuller@iowalakes.edu, 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 .

A formal discrimination complaint process is published in the Student Handbook, Employee Handbook, and the Affirmative Action Plan of the College. **All provisions herein contained are subject to change without notice and do not constitute a contract or offer to contract with any person.**

# CATALOG 2021-2022

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### Algona
2111 U.S. Highway 169 North
P.O. Box 680 Algona, Iowa 50511

(515) 295-9455
1-877-807-9583
FAX (515) 295-3729

### Emmetsburg
3200 College Drive
Emmetsburg, Iowa 50536

(712) 852-3554
1-800-242-5108
FAX (712) 852-2152

### Estherville
300 South 18th Street
Estherville, Iowa 51334

(712) 362-2604
1-800-242-5106
FAX (712) 362-8363

### Spencer
1900 Grand Avenue, Suite B1
Spencer, Iowa 51301

(712) 262-7141
1-877-807-9585
FAX (712) 262-4047

### Spirit Lake
800 21st Street
Spirit Lake, Iowa 51360

(712) 336-3439
1-877-807-9584
FAX (712) 336-1357

### Continuing Education
300 South 18th Street
Estherville, Iowa 51334

(712) 362-7231
1-800-252-5664
FAX (712) 362-3969

### Administrative Offices
19 South 7th Street
Estherville, Iowa 51334

(712) 362-0438
FAX (712) 362-0480

### Farm Laboratory
4145 360th Street
Emmetsburg, Iowa 50536

(712) 852-3027


IOWA LAKES
COMMUNITY COLLEGE

# THE COLLEGE

## THE MISSION

Iowa Lakes Community College is a public, comprehensive educational institution accredited by the Higher Learning Commission. 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 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.

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 multiple four-year institutions offering baccalaureate degree programs on Iowa Lakes' campuses 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. The 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 at 300 South 18th Street. Facilities serve liberal arts and vocational and technical programs.

Vocational, technical, 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 developed into a college campus with facilities for liberal arts courses, community and education services, a Success Center/library, and RSVP main office. 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, and the Northwest Iowa Small Business Development Center.

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

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

The Continuing Education department uses classroom facilities at college-owned sites to deliver instruction and services to 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, the Executive Deans of the Emmetsburg and Estherville campuses, the Executive Director of Business & Community Relations, the Executive Director of Facilities Management, the Executive Director of Marketing, and the 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 by the Higher Learning Commission (hlcommission.org), a regional accreditation agency recognized by the U.S. Department of Education. 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 such as the Veterinary Technician Program and the Welding program have individual 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

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A formal discrimination complaint process is published in the Student Handbook, Employee Handbook, and the Affirmative Action Plan of the College.

## STUDENT SERVICE/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. Applications may be completed online or obtained from any Iowa Lakes Community College campus.

Telephone requests may be directed to 800-346-6018.
Online applications can be completed at www.iowalakes.edu.

## ADMISSION POLICIES-CREDIT PROGRAMS

Iowa Lakes admits students to the arts and science and 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 assessments, 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. Every entering student at Iowa Lakes completes basic skills assessments of English, reading and math.

The tests used are Accuplacer, SAT and ACT. Those who are under prepared for college level courses may need to take developmental courses which improve 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.

Applicants will be notified of their admission to the college by the Director of Admissions.

### READMISSION
Students who have formerly attended Iowa Lakes Community College and who wish to return after an absence of a semester (other than the summer session) should apply for readmission. Students readmitted after an absence will be required to fulfill current graduation requirements.

### TRANSFER STUDENTS
Transfer students must complete all admissions requirements including submission of official transcripts directly from every postsecondary school or college attended whether credit was earned.

### INTERNATIONAL STUDENTS
A student from another country must complete the Admissions application form and provide proof of high school completion, TOEFL (Test of English as a Foreign Language) scores when applicable, and proof of financial sponsorship.

High school transcripts of all secondary school and higher education records must be sent directly to the Admissions office. If the record is in a non-English language, notarized translations must be included. Transcripts must include student and school information along with a date of graduation. If the transcripts are missing a graduation date, a copy of the high school diploma with the graduation date will be required. Students who wish to transfer in college credit will need to have their transcripts evaluated by a credential evaluation organization such as WES (World Education Services).

Students required to submit a TOEFL must submit official TOEFL transcripts with a score of: 500 or above on the paper version, 173 or more on the computer version, or 61 or more on the Internet Based version prior to acceptance.

International students must also submit evidence of financial ability to meet college and living expenses during the first year of attendance. A financial sponsorship form provided by the Admissions office must be completed before an immigration I-20 form will be issued. Visa regulations of the US Department of Immigration and Naturalization must be followed. This school is authorized under Federal law to enroll non immigrant 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.

### RESIDENCY OF FEDERAL PERSONNEL AND DEPENDENTS
A person, or his/her spouse or dependent child, who has moved into the state of Iowa as the result of military or civil orders from the federal government, and the minor children of such persons, are entitled to immediate Iowa residency status.

### VETERAN'S EXEMPTION
A veteran of military service or National Guard, or his/her spouse or dependent child shall be classified as a resident if the veteran is domiciled in Iowa and one of the following conditions is met:

1. The veteran has separated from a U. S. military force with an honorable discharge or a general discharge, is eligible for benefits, or has exhausted benefits, under the federal Post-9/11 Veterans Educational Assistance Act of 2008 or any other federal authorizing veteran educational benefits program.
2. The individual is an active duty military person or activated or temporarily mobilized National Guard member.

To be eligible for the exemption, a dependent child must be claimed as a dependent on an eligible veteran's internal revenue service tax filing for the previous year.

## Registration and Orientation
### REGISTRATION
Registration for incoming freshmen should be completed prior to the start of the term. Students are assigned a faculty advisor to assist with registration and scheduling. Advisors are assigned based on student program or area of study within a transfer degree. Payment of tuition and fees is the final step in registration.

### ORIENTATION
During orientation sessions, each student is assigned an academic advisor.

Orientation continues during the first day of 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 plan to attend an orientation session and College 101, which is held prior to the first day of class.

### 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 class, students should contact the instructor.

### 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 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 aids 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 2.0.

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 2.00 cumulative G.P.A.
The student must successfully complete 67% of their attempted credit hours. Successful completion of courses is 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 only 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 on 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 reevaluated and are either making satisfactory academic progress or are ineligible. If they are ineligible, they have 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 they fail to follow the plan. If the student fails to follow the plan, they will become ineligible. They can 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 has trouble 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.

### DEVELOPEMENTAL 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 and mathematics, and for certain programs, reading as well. Students who are under prepared or 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 be prepared for college level coursework and succeed in the program 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, scholarships, plus general support.

### TUTORING
Peer tutoring is available to all students, by request, through the Advising/Success Centers. Professional tutoring services are also available and operate on a drop in basis. Although this service is available during most semesters, it may not be available during the summer, or on all five campuses. Both services are free of charge to current students.

## Student Assistance Services
### COLLEGE COUNSELING SERVICES
The Iowa Lakes Community College Counseling Program assists 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 electronically 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.

Iowa Lakes Community College degree programs are approved by the Iowa Department of Education for education benefits administered by the U.S. Department of Veterans Affairs. Information concerning eligibility and application for these benefits may be obtained from the VA Regional Office in St. Louis, Mo., on the internet at www.gibill.va.gov.

Veterans or eligible dependents planning to enroll are encouraged to contact the Veterans Affairs Office at least six weeks prior to their anticipated enrollment date to establish eligibility and to avoid delays in payments by the VA. Contact may also be made by telephone at ext. 5284 or by emailing tireland@iowalakes.edu.

Iowa Lakes is a member of the Servicemembers Opportunity Colleges (SOC) Consortium. SOC Consortium members subscribe to principles and criteria ensuring that quality academic programs are available to military students, their family members, civilian employees of the Department of Defense and Coast Guard, as well as veterans. A list of current SOC Consortium member institutions can be found at www.soc.aascu.org.

Iowa Lakes Community College will not impose any penalty, including the assessment of late fees, the denial of access to classes, libraries, or other institutional facilities, or the requirement that a covered individual (any individual who is entitled to VA educational assistance under Chapter 31 or 33) borrow additional funds, on any covered individual because of the individual's inability to meet his or her financial obligations to the college due to the delayed disbursement of a payment to be provided by the Secretary under Chapter 31 or 33.

Iowa Lakes Community College may require a covered individual (any individual who is entitled to VA educational assistance under Chapter 31 or 33) to take the following additional actions:

- Submit a certificate of eligibility for entitlement to educational assistance not later than the first day of a course of education for which the individual has indicated the individual wishes to use the individual's entitlement to educational assistance.
- Submit a written request to use such entitlement.
- Provide additional information necessary to the proper certification of enrollment by the college.

### 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 coordinator of housing at Emmetsburg, Estherville, or Spencer campus. All students residing in college housing are required to participate in campus-life sessions. 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.

Campuses in Emmetsburg, Estherville and Spencer 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 cybercafé, meeting rooms, television and game areas are provided. Student areas are available at Algona, and Spirit Lake.

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

## 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. There 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. Students also forfeit their $100 housing deposit if their contract is terminated at any point. These procedures may be appealed if extenuating circumstances occur; consult the student handbook or the housing director for more information. Any refunds that occur will be applied to out-standing balances with the balance being given to the student.

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 and Emmetsburg. Meal cards may be purchased by those students without a meal contract.

## CAMPUS STORES

Campus stores are in Emmetsburg and Estherville. Campus Store hours are Monday – Thursday 8:00-4:30; Friday 7:30-4:00; summer hours are posted. Package delivery for students is available at both Campus Stores. All students will order most of their course textbooks online through the MBS Online Store. To order textbooks online, visit www.iowalakes.edu/campusstore and select Purchase Textbooks - MBS Online. Students will find instructions for how to order books for both Financial Aid and Non-Financial Aid students. Prices for instructor selected textbooks are determined by individual publishers, not the Campus Store. Payment for books is due at time of purchase. Students are encouraged to visit this page often for updates on MBS Online Store information, free shipping and financial aid dates, buyback, and other important textbook and supplies information. Students are strongly encouraged to order books early to keep their shipping costs low and ensure items arrive on time for classes to start. Some program and course textbooks are only available in the Campus Stores and will be stated on the MBS Online Store for a course. In addition, financial aid students can only use their SFA Vouchers to purchase textbooks during a specific time period. These dates are posted on the website. Follow the Iowa Lakes Campus Store Facebook page to stay up-to-date on Campus Store events, sales, merchandise, and textbook purchasing information.

Book returns are ONLY accepted with an add/drop slip and ONLY for the 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. Copyright laws will not allow the Campus Store to accept returns where seals are broken. Book buyback days are the last five days of each semester and the last day of each summer session. Buyback is an online option at any time, but the student will be responsible for return shipping for books not sold back during buyback days. All supplemental materials must be included with books when they are returned.

The Campus Stores also sell various school supplies, logo clothing items, and miscellaneous snacks and drinks.

## 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 through local agents. 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 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.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 based on 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 based on 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.

### IOWA LAST DOLLAR SCHOLARSHIP

A grant for residents of the state of Iowa and who are enrolled in programs of need as determined by the Iowa Workforce and Iowa Student Aid Commission. This grant is not need based.

### 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 students 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, depending upon qualifications. Members gather periodically to take part in cultural, intellectual, and aesthetic activities. They can qualify for Presidential Scholars recognition at commencement exercises.

## 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.

### 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 success. Sixteen Intercollegiate athletics operate through the Emmetsburg, Estherville, and Spencer campuses. Intramural athletics provide organized competition, individual tournaments, and outdoor recreation for all students.

Opportunities for fun and enjoyment through participation in sports activities are sponsored at Emmetsburg, Estherville, and Spencer.

### 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

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.

Iowa Lakes Community College will not tolerate the sexual abuse/violence of students, faculty and/or staff at any campus, facility, or activity. The office of the campus dean, or supervisor, or the Title IX Coordinator shall be responsible for reports of sexual violence or assault.

## 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 on the Iowa Lakes website – www.iowalakes.edu.

## 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 are 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

Iowa Lakes Community College follows Iowa Administrative Code when defining course credit and the minimum length of instructional time for a credit hour. Iowa Administrative Code 281, Chapter 21.2(12), sets requirements for determining credit hours based on the amount of instructional contact time and delivery method. One academic hour= 55 clock minutes.

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 to 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 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 My Iowa Lakes system at the middle of each regular semester. Final grades are also available to students through the My Iowa Lakes system 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 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.

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, technical, or continuing education areas. The following degrees are awarded for college credit two-year programs: Associate in Arts, Associate in Science, and Associate in Applied Science. Diplomas are awarded for college credit technical programs of less than two years duration.

To be eligible for a degree or diploma in a credit program, a student must complete a minimum of 25% of the degree program credits in courses at Iowa Lakes Community College.

**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, 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, global, historical and social issues; (f) appreciation for the fine arts; and (g) technology.

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 three credits must be designated to fulfill the diversity requirement.
- 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 (3)
ENG 106 – Composition II (3)
SDV 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)
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 140 – Finite Math (3)
MAT 156/157 – Statistics (3)
or BUS 211/212 – Business Statistics (4)
MAT 210/211 – Calculus I (4.00, 5.00)
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 ECN 120 – Principles of Macroeconomics (3)
ECN 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)
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 150– World Literature. I (3)
LIT 161 – The Short Story (3)
LIT 184 – Young Adult Literature (3)

II MUS 100 – Music Appreciation (3)
MUS 203 – History of American Music (3)
MUS 205 – Jazz History & Appreciation (3)

III ART 101 – Art Appreciation† (3)

IV PHI 101 – Introduction to Philosophy (3)
PHI 105 – Introduction to Ethics (3)
REL 101 – Survey of World Religions† (3)

V FL XXX – (any Foreign Language)†

VI HIS 110/111 – Western Civilization* (3)
MMS 101 – Mass Media* (3)
SOC 186 – Contemporary Global Issues* (3)

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

**Computers** (3 semester credits)
CSC 110 – Intro to Computers (3)
CSC 116 – Information Computing (3)
BCA 212 – Intro to Comp Apps in Business (3)
BCA 218 – Advanced Microsoft Office Apps (3)

**Diversity** (3 semester credits)
† indicates a course that fulfills the diversity requirement. This course may also fulfill another general degree requirement.

Other courses which meet the diversity requirement:
BUS 161 – Human Relations (3)

**Plus, Electives To Total 64 Semester Credits:**
May include up to 16 vocational/technical credits; do not include developmental courses or special needs courses.

## 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 the general requirements at several area colleges and universities 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 three credits must be designated to fulfill the diversity requirement.
- 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/math courses) 20

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

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

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

**Diversity** (3 semester credits)
(Select from AA Diversity courses)

## Associate in Applied Science Degree Requirements

The Associate in Applied Science degree is awarded to students who complete two-year technical 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 mathematics 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; and completion of the college diversity requirement.

## Diploma Requirements

Diplomas are issued to students who complete full-time technical 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; a human relations course; and completion of the college diversity requirement.

## Certificate Requirements

Students enrolled in adult vocational or adult general education 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 according 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. Students must meet three HiSET criteria to complete

the requirements for their equivalency diploma; score 8 out of 20 on each of the five sub-tests, score at least 2 out of 6 on the writing essay, and achieve a total scaled score of at least 45 on all five HiSET sub-tests.

To take the HiSET exam in the state of Iowa, you much meet the following eligibility requirements:

1. You must be at least 18 years of age to take the exam without meeting special circumstances. If you are 16-17 years old, you may take the HiSET exam, but with the following conditions:
   - If you are 16 years old – you must be a resident of an Iowa Juvenile Institution (State Training Schools at Eldora and Mitchellville) or placed under the supervision of a Juvenile Probation Office.
   - If you are 17 years old (not a resident of an Iowa state training school or Iowa juvenile home, and not under the supervision of a probation office), you may still take the HiSET exam. However, you will not be able to receive your state- issued high school equivalency diploma until you reach age 18 and your class from 9th grade has graduated. You will be provided with a transcript.
   - You must be officially withdrawn from high school; a drop form or proof of non-enrollment is necessary.
2. Iowa requires all test takers to receive instruction in an adult education classroom before taking the HiSET exam.
3. You must pass Official Practice Tests in each subject area and provide proof of acceptable scores for admittance to testing. Forms to verify readiness are completed in the AEL Program.
4. You must present approved identification on test day at the HiSET test center along with the verification form.

For more information, contact the AEL Program.

# 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 proper notification to the student. Registration for courses may also be completed online. *Veterans and service members are granted the freedom to enroll as early as possible to accommodate their unique needs.*

## 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 prorated 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 college website for specific dates.)

Refund Schedule

| | |
|---|---|
| *Normal/full-length semester classes* | |
| First ten class days of semester | 100% tuition refund |
| After day 10 | No refund |
| *8-week classes* | |
| First five days of class | 100% tuition refund |
| After day 5 | No refund |
| *Less than 8 weeks* | |
| First day of class | 100% tuition refund |
| After day 1 | No refund |

ECollege/online courses and other special course schedules differ; beginning dates and refund dates vary. Compressed course drops are canceled with refund only before the 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.r2t4 .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 over-due tuition and fees 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 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 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 timeline 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:

- Selected Advanced Placement (AP) 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 residence before military experience credit or credit by examination will be posted on the permanent record. A maximum of 30 semester credits may be accepted for military experience, experiential learning, and credit by examination. Some forms of earning credit may incur Iowa Lakes fees and charges for test administration, evaluation, and/or posting. Some standardized tests require payment of examination fees as well.

# 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 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.

# Privacy of Records

The Family Educational Rights and Privacy Act (FERPA) afford students certain rights with respect to their education records. They are:

1. The right to inspect and review the student's education records within 45 days of the day the college receives a request for access. A student should submit to the Director of Records and Registration/ Registrar or other appropriate official a written request that identifies the record(s) the student wishes to inspect. The Registrar will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the Registrar, the Registrar shall advise the student of the correct official to whom the request should be addressed.
2. The right to request the amendment of the student's education records that the student believes are inaccurate or misleading. A student may ask the college to amend a record that the student believes is inaccurate or misleading. The student should write to the college official responsible for the record, clearly identify the part of the record the student wants changed and specify why it is inaccurate or misleading. (Note: FERPA was not intended to provide a process to be used to question substantive judgments which are correctly recorded. The rights of challenge are not intended to allow a student to contest, for example, a grade in a course because the student felt a higher grade should have been assigned.) If the college decides not to amend the record as requested by the student, the college will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.
3. The right to consent to disclosures of personally identifiable information contained in the student education records, except to

the extent that FERPA authorizes disclosure without consent. One exception which permits disclosure without consent is disclosure to college officials with legitimate educational interests. A college official is a person employed by the college in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff, if any); a person or company with whom the college has contracted (such as an attorney, auditor, or collection agent); a person serving on the college board of trustees, or a student serving on an official committee, such as a discipline or grievance committee, or assisting another college official in performing his or her tasks. A college official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility. Upon request, the college discloses education records without consent to another school in which the student seeks or intends to enroll.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures of Iowa Lakes Community College to comply with the requirements of FERPA. The name and address of the office that administers FERPA is: Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue, SW, Washington, DC 2000.

### DIRECTORY INFORMATION

Iowa Lakes considers the following to be directory information and will release it unless the student requests the college not to 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

An official transcript of credit courses taken at Iowa Lakes Community College is issued to a third party only upon request by the student. Students/former students need to complete an electronic Transcript Request, which is available on the Iowa Lakes Community College website.

There will be a $5 fee per requested transcript. Transcripts are not released if the student has an overdue financial obligation to the college. Transcripts from high schools, other colleges, or universities that have been sent to Iowa Lakes for the student file, will not be copied and released. Copies need to be obtained directly from the institution of origin.

## 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 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 EDUCATION AND LITERACY (AEL)

The Adult Education and Literacy (AEL) program provides adults with a 'second chance' to learn and/or brush up on basic skills such as reading, writing, and math, as well as acquire new skills such as computer literacy. Educational services are available at no cost to eligible adult learners and are designed to meet the educational needs of everyone.
Services can include:

- Basic skills instruction in reading, writing, math, listening, and speaking.
- HSED Test Preparation in science, social studies, mathematics, language arts-reading, language arts-writing, and calculator training.
- Official Practice Test (OPT) administration for documenting readiness to take the HiSET™ test.
- English for Speakers of Other Languages (ESOL) instruction in pre-literacy, reading, writing, listening, speaking, grammar, U.S. history and government, and cultural literacy.
- College readiness skills instruction in organization and time management, technology, goal setting, test taking skills, and self-advocacy.
- Job readiness skills Instruction in goal setting, career planning, personal work attributes, employee rights and responsibilities, job search strategies, and unemployment survival; and
- Computer literacy skills in keyboarding, word processing and other introductory skills.

### 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

### SENIOR YEAR PLUS ENROLLMENT OPTIONS ACT (DUAL CREDIT CLASSES)

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 Senior Year Plus, Iowa Lakes has established the following guidelines.

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

- Accuplacer or ACT score
- Signed Iowa Lakes High School registration form (available from high school counselor)

All high school registration forms require a high school administrator 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 to enroll in Composition I, Composition II or any college level math class. 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 Senior Year Plus, the local school district assumes responsibility for tuition.

Any course withdrawal or changes to a schedule must be approved by the high school counselor. Withdrawal and refund policies and procedures are detailed elsewhere in this catalog.

All information regarding dual credit classes is available through high school guidance counselors.

### 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.

# TRANSFER MAJORS

Iowa Lakes Community College offers transfer majors for students who want to transfer to one of Iowa's regent universities (Iowa State University, the University of Iowa, or the University of Northern Iowa). Each Associate in Arts (AA) or Associate in Science (AS) transfer major degree is designed for students transferring to a four-year institution to study a specific major and to provide the first two years of a bachelor's degree program. By earning this degree, students will have met the general course requirements for a specific major of a four-year institution. Each program is 64 total credits, of which three credits must be designated to fulfill the diversity requirement.

## BIOLOGY TRANSFER MAJOR

(AS – 64 credits)
**Biology Core** (22 credits)
BIO 112 – General Biology (4)
BIO 113 – General Biology (4)
MAT 210 or MAT 211 Calculus I (4, 5)
CHM 166 – General Chemistry I (5)
CHM 176 – General Chemistry II (5)

See AA course listing on page 14 for a list of courses in the following areas.

**Communications** (10 credits)
**Computers** (3 credits)
**Humanities** (3 credits)
**Social Science** (6 credits from two areas)
**Electives** (20 credits)

## BUSINESS TRANSFER MAJOR

(AA – 64 credits)
**Business Core** (27 credits)
ACC 131 – Principles of Accounting (4)
ACC 132 – Principles of Accounting (4)
BUS 185 – Business Law (3)
BUS 212 – Business Statistics II (3)
CSC 116 – Info Computing (3)
ECN 120 – Macroeconomics (3)
ECN 130 – Microeconomics (3)
MAT 157 – Statistics (4)
or BUS 211 – Business Statistics (4)

See AA course listing on page 14 for a list of courses in the following areas.

**Communications** (10 credits)
**Humanities** (9 credits)
**Science/Mathematics** (8 additional credits – must take at least 1 science course)
**Social Science** (3 credits)
**Electives** (7 credits)

## CHEMISTRY TRANSFER MAJOR

(AS – 64 credits)
**Chemistry Core** (30 credits)
CHM 166 – General Chemistry I (5)
CHM 176 – General Chemistry II (5)
CHM 263 – Organic Chemistry I (5)
CHM 273 – Organic Chemistry II (5)
MAT 210 or MAT 211 Calculus I (4, 5)
MAT 217 Calculus II (5)

See AA course listing on page 14 for a list of courses in the following areas.

**Communications** (10 credits)
**Computers** (3 credits)
**Humanities** (3 credits)
**Social Science** (6 credits from two areas)
**Electives** (12 credits)

## CRIMINAL JUSTICE TRANSFER MAJOR

(AA – 64 credits)
**Criminal Justice Core** (24 credits)
CRJ 100 – Intro to Criminal Justice (3)
CRJ 130 – Criminal Law (3)
CRJ 133 – Const. Criminal Procedures (3)
CRJ 200 – Criminology (3)
CRJ 201 – Juvenile Delinquency (3)
MAT 156 – Statistics (3)
or MAT 157 – Statistics (4)
or BUS 211 – Business Statistics (4)
POL 111 – Intro to American Government (3)
SOC 110 – Intro to Sociology (3)

See AA course listing on page 14 for a list of courses in the following areas.

**Communications** (10 credits)
**Computers** (3 credits)
**Humanities** (9 credits)
**Math** (3 credits)
**Science** (8 credits)
**Social Science** (3 credits)
**Electives** (4 credits)

## MATH TRANSFER MAJOR

(AS – 64 credits)
**Math Core** (21 credits)
MAT 157 – Statistics (4)
MAT 211 – Calculus I (5)
MAT 217 – Calculus II (5)
MAT 218 – Calculus III (3)
MAT 227 – Differential Equations (4)

See AA course listing on page 14 for a list of courses in the following areas.

**Communications** (10 credits)
**Computers** (3 credits)
**Humanities** (3 credits)
**Science** (4 credits)
**Social Science** (6 credits from two areas)
**Electives** (17 credits)

## PHYSICS TRANSFER MAJOR

(AS – 64 credits)
**Physics Core** (23 credits)
MAT 211 – Calculus I (5)
MAT 217 – Calculus II (5)
MAT 218 – Calculus III (3)
PHY 212 – Classical Physics I (5)
PHY 222 – Classical Physics II (5)

See AA course listing on page 14 for a list of courses in the following areas.

**Communications** (10 credits)
**Computers** (3 credits)
**Humanities** (3 credits)
**Social Science** (6 credits from two areas)
**Electives** (19 credits)

## PSYCHOLOGY TRANSFER MAJOR

(AA – 64 credits)
**Psychology Core** (19 credits)
BIO 105 – Introductory Biology (4)
or BIO 112 – General Biology I (4)
MAT 156 – Statistics (3)
or MAT 157 – Statistics (4)
or BUS 211 – Business Statistics (4)
PHI 101 – Intro to Philosophy (3)
or PHI 105 – Intro to Ethics (3)
PSY 111 – Intro to Psychology (3)
PSY 121 – Dev. Psychology (3)
PSY 251 – Social Psychology (3)

See AA course listing on page 14 for a list of courses in the following areas.

**Communications** (10 credits)
**Computers** (3 credits)
**Humanities** (6 credits)
**Social Science** (3 credits)
**Science/Mathematics** (5 additional credits)
**Electives** (17 credits)

## SOCIOLOGY TRANSFER MAJOR

(AA – 64 credits)
**Sociology Core** (19 credits)
MAT 157 – Statistics (4)
POL 111 – American National Government. (3)
PSY 251 – Social Psychology (3)
SOC 110 – Intro to Sociology (3)
SOC 115 – Social Problems (3)
SOC 120 – Marriage and Family (3)

See AA course listing on page 14 for a list of courses in the following areas.

**Communications** (10 credits)
**Computers** (3 credits)
**Humanities** (9 credits)
**Science/Mathematics** (9 additional semester credits – must take at least 1 science course)
**Electives** (14 credits)

# TECHNICAL PROGRAMS- 2 YEAR

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 Technology
Aviation & Airport Management
Boat and Watercraft Technician
Business Administration & Management
Computer Programming
Construction Technology
Cosmetology
Criminal Justice
Digital, Social & Broadcast Productions
Early Childhood Education
Electrical Technology
Engineering Technology
Environmental Studies
Farm Equipment & Diesel Technology
Game Design & Development
Graphic Design
Heating, Ventilation & Air Conditioning Technology
Hotel and Restaurant Management
Human Services
Paralegal & Legal Studies
Powersports & Power Equipment Technology
Sales & Marketing Management
Substance Abuse Counseling
Surgical Technology
Veterinary Technician
Water Quality Technician
Wind Energy & Turbine Technology

## ACCOUNTING SPECIALIST

(AAS – 70 credits)

Term 1 (17 credits)
ACC 131 – Principles of Accounting I (4)
ACC 161 – Payroll Accounting (3)
BUS 175 – Business Seminar I (1)
CSC 110 – Introduction to Computers (3)
ENG 105 – English Composition I (3)
MAT 110 – Math for Liberal Arts (3)

Term 2 (19 credits)
ACC 132 – Principles of Accounting II (4)
ACC 310 – Computer Accounting (2)
or ACC 311 – Computer Accounting (3)
BUS 211 – Business Statistics (4)
SPC 101 – Fundamentals of Oral Communication (3)
Humanities (3)
Social Science (3)

Term 3 (3 credits)
ACC 941 – Practicum (3)
or ENG 106 – English Composition II (3)

Term 4 (15 credits)
ACC 231 – Intermediate Accounting I (4)
ACC 221 – Cost Accounting (3)
ACC 261 – Income Tax Accounting (3)
ACC 929 – Individual Projects (2)
ECN 120 – Macroeconomics (3)

Term 5 (16 credits)
ACC 232 – Intermediate Accounting II (4)
or ACC 702 – Certified Bookkeeper Review (4)
BUS 115 – Business Correspondence (2)
ECN 130 – Microeconomics (3)
BCA 218 – Adv Microsoft Office Applications (3)
or BUS 102 – Introduction to Business (3)
or MGT 101 – Principles of Management (3)
Science (4)

## ADMINISTRATIVE ASSISTANT

(AAS – 68 credits)

Term 1 (16 credits)
ACC 131 – Principles of Accounting I (4)
or ACC 111 – Introduction to Accounting (3)
ADM 116 – Keyboarding II (3)
ADM 132 – Business Math and Calculators (2)
ADM 254 – Business Professionalism (1)
CSC 110 – Introduction to Computers (3)
SPC 101 – Fundamentals of Oral Communication (3)

Term 2 (16 credits)
ADM 162 – Office Procedures (3)
ADM 255 – Business Professionalism II (1)
BCA 134 – Word Processing (3)
ENG 105 – English Composition I (3)
Choose 6 elective credits, suggest:
BCA 185 – Beginning Webpage Development (3)
ACC 161 – Payroll Accounting (3)

Term 3 (16 credits)
ADM 354 – Business Professionalism III (1)
ADM 941 – Practicum (5)
MAT 110 – Math for Liberal Arts (3)
Science (4)
Social Science (3)

Term 4 (20 credits)
ADM 355 – Business Professionalism IV (1)
BUS 161 – Human Relations (3)
ENG 106 – English Composition II (3)
Business Elective (3)
Humanities (3)
Social Science (3)
Science (4)

## AGRIBUSINESS TECHNOLOGY

(AAS – 78 credits)

Term 1 (18 credits)
AGC 111 – Basic First Aide and Life Support (1)
AGA 154 – Fundamentals of Soil Science (3)
AGC 100 – Ag Computer Applications (3)
AGS 113 – Survey of the Animal Industry (3)
AGC 936 – Occupational Experience (3)
AGA, AGC, AGS, choose from (2)
BUS 161 – Human Relations (3)

Term 2 (17 credits)
AGA 284 – Pesticide Application Certification (3)
AGA 114 – Principles of Agronomy (3)
AGC 937 – Occupational Experience II (3)
AGS 319 – Animal Nutrition (3)
AGM 203 – Agricultural Welding (2)
COM 781 – Written Comm in the Workplace (3)
or ENG 105 – English Composition I (3)

Term 3 (12 credits)
AGC 317 – Agricultural Field Studies (1)
AGB 437 – Commodity Marketing (3)
AGA 375 – Integrated Crop Management (2)
AGA, AGC, AGS choose from (3)
MAT 772 – Applied Math (3)
or MAT 110 – Math for Liberal Arts (3)

Term 4 (18 credits)
AGA 352 – Soil Science and Fertilizer (2)
ACC 111 – Introduction to Accounting (3)

AGB 327 – Principles of Farm Business Management (2)
AGM 102 – Farm Equipment Maintenance (1)
or AGP 242 – Precision Agriculture Applications (2)
AGC 938 – Occupational Experience III (3)
AGB 436 – Grain Merchandising (2)
AGB 194 – Beginning Sales (2)
SPC 101 – Fundamentals of Oral Communication (3)

Term 5 (14 credits)
AGB 466 – Agricultural Finance (3)
AGC 210 – Employment Seminar (1)
AGB 210 – Ag Law (2)
AGA 353 – Advanced Soil Fertility (2)
AGB, AGC or AGS (6)

## AGRICULTURE PRODUCTION TECHNOLOGY

(AAS – 78 credits)

Term 1 (18 credits)
AGA 154 – Fundamentals of Soil Science (3)
AGC 111 – Basic First Aid and Life Support (1)
AGC 936 – Occupational Experience (3)
AGC 100– Ag Computer Applications (3)
AGS 113 – Survey of the Animal Industry (3)
AGA, AGB, AGC, AGS choose from (2)
BUS 161 – Human Relations (3)

Term 2 (16 credits)
AGA 284 – Pesticide Application Certification (3)
AGA 114 – Principles of Agronomy (3)
AGC 937 – Occupational Experience II (3)
AGS 319 – Animal Nutrition (3)
AGM 203 – Agricultural Welding (2)
AGA, AGB, AGC, AGS choose (2)

Term 3 (12 credits)
AGC 317 – Agricultural Field Studies (1)
AGB 437 – Commodity Marketing (3)
MAT 772 – Applied Math
or MAT 110 – Math for Liberal Arts (3)
AGA, AGB, AGC, AGS choose (5)

Term 4 (17 credits)
ACC 111 – Introduction to Accounting (3)
AGB 327 – Principles of Farm Business Mngt (2)
AGB 281 – Computerized Agriculture Accounting (1)
AGM 102 – Farm Equipment Maintenance (1)
or AGP 242 – Precision Agricultural Applications (2)
AGC 938 – Occupational Experience III (3)
COM 781 – Written Comm in the Workplace
or ENG 105 – English Composition I (3)
SPC 101 – Fundamentals of Oral Communication (3)
AGA, AGB, AGC, AGS choose from: (1)

Term 5 (15 credits)
AGB 466 – Agricultural Finance (3)
AGC 210 – Employment Seminar (1)
AGA, AGB, AGC, AGS choose from: (11)

## ASSOCIATE DEGREE NURSING

(AAS – 85 credits)

Must be completed before starting program
BIO 168 – Human Anatomy & Physiology I (4)
BIO 105 – Intro Biology (4)
CHM 151 – College Chemistry I (4)

Term 1 (17 credits)
BIO 173 – Human Anatomy & Physiology II (4)
BIO 151 – Nutrition (3)
ADN 111 – Nursing Concepts I (7)
HSC 151 – Dosage Calculations (1)
HSC 202 – Health Informatics (2)

Term 2 (14 credits)
PSY 111 – Introduction to Psychology (3)
or PSY 121 – Developmental Psychology (3)
ADN 212 – Nursing Concepts II (7)
ADN 213 – Pharmacology Aps (4)

Term 3 (14 credits)
ADN 314 – Nursing Concepts III (7)
ADN 413 – Behavioral Health Concepts (4)
or ADN 414 – Maternal/Newborn Concepts (4)
ENG 105 – Composition I (3)

Term 4 (13 credits)
BIO 186 – Microbiology & Lab (4)
ENG 106 – English Composition II (3)
SPC 101 – Fundamentals of Oral Communication (3)
PSY 121 – Developmental Psychology (3)
or PSY 111 – Introduction to Psychology (3)

Term 5 (15 credits)
ADN 414 – Maternal/Newborn Concepts (4)
or ADN 413 – Behavioral Health Concepts (4)
ADN 415 – Nursing Concepts IV (7)
MAT 121 – College Algebra (4)
or MAT 156 – Statistics (3)
or MAT 157 – Statistics (4)

## AUTOMOTIVE TECHNOLOGY

(AAS–83 credits)

Term 1 (18 credits)
AUT 115 – Automotive Shop Safety (1)
AUT 104 – Introduction to Automotive Technology (3)
AUT 600 – Intro to Elec Systems and Testing (3)
AUT 608 – Automotive Electrical (3)
AUT 651 – Advanced Auto Electrical (3)
WEL 334 – Trade and Industry Welding (2)
MAT 772 – Applied Math (3)

Term 2 (18 credits)
AUT 180 – Engine Repair Theory (3)
AUT 184 – Brakes Lab (3)
AUT 186 – Engine Repair Lab (3)
AUT 510 – Brakes Theory (2)
AUT 704 – Auto Heating and Air Conditioning (4)
COM 723 – Workplace Communications (3)

Term 3 (10 credits)
AUT 412 – Automotive Suspension and Steering (3)
AUT 413 – Auto Suspension and Steering Lab (3)
AUT 890 – Auto Tech On–the–Job Training (4)

Term 4 (19 credits)
AUT 212 – Automatic Transmissions/Transaxles Theory (4)
AUT 213 – Auto Transmissions/Transaxles Lab (3)
AUT 260 – Manual Transmission Theory (3)
AUT 313 – Manual Transmission Lab (3)
BUS 161 – Human Relations (3)
Business related course: choose from BCA–212, CSC–110, ACC–111 or BUS–130 (3)

Term 5 (18 credits)
AUT 827 – Automotive Ignition Systems (4)
AUT 834 – Automotive Fuel Systems (4)
AUT 842 – Auto Computerized Engine Controls (4)
AUT 851 – Auto Engine Performance Diagnosis (3)
BUS 126 – Business Principles (3)

## AVIATION & AIRPORT MANAGEMENT

(AAS – 69 credits)

Term 1 (16 credits)
AVI 140 – Private Pilot Ground School (4)
AVI 180 – Private Pilot Flight Lab (3)
ENG 105 – English Composition (3)
MAT 110 – Math for Liberal Arts (3)
CSC 110 – Intro to Computers (3)

Term 2 (17 credits)
AVI 212 – Instrument Pilot Ground School (4)
AVI 245 – Instrument Rating Flight Lab (3)
SPC 101 – Fundamentals of Oral Comm (3)
Math (3)
Science (4)

Term 3 (9 credits)
AVI 248 – Commercial Pilot Flight Lab (5)
AVI 261 – Commercial Pilot Ground School (3)
AVI 407 – Multi–Engine: Commercial Rating Flight Lab (1)

Term 4 (12 credits)
AVI 300 – Flight Instructor Ground School (3)
AVI 350 – Flight Instructor Flight Lab (3)
MGT 101–Prin. of Management (3)
BUS 161 – Human Relations (3)
or SOC 110 – Intro to Sociology (3)
or PSY 111– Intro to Psychology (3)

Term 5 (15 credits)
AVI 129 – Employment Prep for Aviation Careers (1)
AVI 301 – Instrument Instructor (1)
AVI 406 – Multi–Engine: Flight Instructor Flight Lab (1)
ENG 106 – Composition II (3)
or AVI 941 – Practicum (3)
MKT 110 – Principles of Marketing (3)
Business or Humanities– choose two classes (6)

## BOAT & WATERCRAFT TECHNICIAN

(AAS – 78 credits)

Term 1 (19 credits)
MSE 164 – Marine Engine 2 & 4–Stroke Theory (2)
MSE 165 – Marine Engine 2 & 4–Stroke Thry/ Lab (2)
MSE 153 – Fund of Electricity Theory and Lab (3)
MSE 154 – Intro to Power Generators (1)
MSE 147 – Introduction to Marine Service (2)
MSE 149 – Introduction to Marine Rigging (2)
MSE 151 – Shop Safety and Procedures (1)
MSE 173 – Marine Fuel Sys Theory and Lab (3)
BUS 161 – Human Relations (3)

Term 2 (17 credits)
COM 723 – Workplace Communications (3)
MSE 159 – Snowmobile Systems (3)
MSE 190 – Marine Electrical Sys Theory/ Lab (4)
MSE 148 – Introduction to Marine Detailing (1)
MSE 183 – Personal Watercraft Systems (3)
MSE 169 – Marine Drive Systems Theory and Lab (3)

Term 3 (9 credits)
MSE 932 – Internship (6)
MAT 772 – Applied Math (3)

Option I: Advanced Business Management
Term 4 (18 credits)
ACC 111 – Introduction to Accounting (3)
MSE 252 – Marine Advanced Drivability (3)
MSE 150 – Shop Management (3)
Instructor approved electives (9)

Option II: Advanced Technician
Term 4 (18 credits)
BUS 102 – Intro to Business
or BUS 126 – Business Principles (3)
MSE 150 – Shop Management (3)
MSE 252 – Marine Advanced Drivability (3)
MSE 273 – Marine Advanced Fuel Systems (3)
MSE 286 – Marine Advanced Electrical (3)
Instructor approved electives (3)

Term 5 (15 credits)
Concentration Electives (15)

## BUSINESS ADMINISTRATION & MANAGEMENT

(AAS – 69 credits)

Term 1 (17 credits)
ACC 131 – Principles of Accounting I (4)
BUS 102 – Introduction to Business (3)
BUS 175 – Business Seminar I (1)
CSC 110 – Introduction to Computers (3)
ENG 105 – English Composition I (3)
Social Science (3)

Term 2 (16 credits)
ACC 132 – Principles of Accounting II (4)
MGT 101 – Principles of Management (3)
SPC 101 – Fundamentals of Oral Communication (3)
MAT 110 – Math for Liberal Arts (3)
Business Elective (3)

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

Term 4 (15 credits)
BUS 185 – Business Law I (3)
ECN 120 – Principles of Macroeconomics (3)
Business Electives (6)
Humanities (3)

Term 5 (18 credits)
ECN 130 – Principles of Microeconomics (3)
BUS 115 – Business Correspondence (2)
or BUS 121 – Business Communications (3)
BCA 218 – Adv Microsoft Office Applications (3)
MKT 110 – Principles of Marketing (3)
Business Elective (3)
Science (4)

## COMPUTER PROGRAMMING

(AAS – 69 credits)

Term 1 (15 credits)
CIS 141 – Computer Science (3)
CIS 332 – Database and SQL (3)
NET 122 – Computer Hardware Basics (3)
BUS 161 – Human Relations (3)
or SOC 110 Intro to Sociology (3)
or PSY–111 Intro to Psychology (3)
MAT 140 – Finite Math (3)

Term 2 (16.00 credits)
CIS 204 – Intro to Website Development (3)
NET 140 – Networking Essentials (4)
ENG 105 – English Composition I (3)
CSC 110 – Intro to Computers (3)
Humanities (3)

Term 3 (5 credits)
CIS 941 – Computer Science Practicum (5)

Term 4 (17 credits)
CIS 125 – Intro to Programming Logic w/Lang (3)
CIS 161 – C++ (3)
MAT 157 – Statistics (4)
or MAT 156 – Statistics (3)
Science (4)
Social Science (3)

Term 5 (16 credits)
CIS 143 – Advanced Computer Science (4)
MMS 185 – Digital Media Law & Ethics (3)
SPC 101 – Fundamentals of Oral Communication (3)
WDV 132 – Mobile Application Development (3)
ENG 106 – Composition II (3)

## CONSTRUCTION TECHNOLOGY

(AAS – 72 credits)

Term 1 (18 credits)
CON 113 – Construction Print Reading (2)
CON 195 – Foundations and Concrete (5)
CON 201 – Framing Techniques and Lab I (2)
CON 218 – Framing Techniques and Lab II (4)
CON 300 – Optimum Value Engr–Adv. Framing (1)
CON 217 – Exterior Finishing (3)
HSC 134 – First Aid/CPR (1)

Term 2 (18 credits)
CON 106 – Construction Welding (1)
or CON 120 – Construction Estimating (1)
CON 238 – Techniques of Exterior Covering (4)
COM 725 – Workplace Com Essentials. (2)
or ENG 105 – English Composition I (3)
CON 228 – Methods of Interior Finishing & Lab (3)
CON 229 – Installation of Interior Finishing (3)
BUS 161 – Human Relations (3)
MAT 770 – Applied Math (2)

Term 3 (6 credits)
CON 431 – Construction Internship I (6)

Term 4 (15 credits)
SPC 101 – Fund of Oral Communication (3)
CON 932 – Internship (3)
Business or Construction electives: (9)

Term 5 (15 credits)
CON 351 – Computer Gen Blueprint and Design (3)
ACC 111 – Introduction to Accounting (3)
CSC 110 – Introduction to Computers (3)
Business or Construction electives: (6)

## COSMETOLOGY

(AAS – 72 credits)

Term 1 (16 credits)
BIO 163 – Essentials of Anatomy and Physiology (4)
COS 111 – Cosmetology Theory (6)
COS 159 – Practical Cosmetology Skills I (6)

Term 2 (14 credits)
BUS 161 – Human Relations (3)
COS 117 – Cosmetology Theory II (5)
COS 118 – Applied Cosmetology Skills II (6)

Term 3 (13 credits)
COS 130 – Cosmetology Theory III (5)
COS 172 – Practical Cosmetology Skills III (6)
MAT 770 – Applied Math (2)
or MAT 110 – Math for Liberal Arts (3)

Term 4 (15 credits)
COM 723 – Workplace Communications (3)
or ENG 105 – Composition I (3)
COS 120 – Applied Cosmetology Skills IV (6)
COS 131 – Cosmetology Theory IV (4)
COS 176 – Preceptorship (2)

Term 5 (14 credits)
COS 132 – Cosmetology Theory V (3)
COS 173 – Practical Cosmetology Skills V (6)
COS 175 – Comp Cosmetology Review (2)
MKT 162 – Retail Merchandising (3)

## CRIMINAL JUSTICE

(AAS – 68 credits)

Term 1 (18 credits)
CRJ 201 – Juvenile Delinquency (3)
CRJ 100 – Introduction to Criminal Justice (3)
CRJ 200 – Criminology (3)
ENG 105 – Composition I (3)
PEH 225 – Healthy Lifestyles Management (3)
CJ Concentration courses: choose one
CRJ 170 – Overview of Cybercrime (3)
or CRJ 141 – Criminal Investigation (3)
or CRJ 136 – Correctional Law (3)
or CRJ 208 – Introduction to Private Security (3)
or CRJ 110 – Patrol Procedures (3)
or CRJ 120 – Introduction to Corrections (3)
or CRJ 220 – Community–Based Corrections (3)
or JOU 171 – Introduction to Photography (3)
or CRJ 900 – CJ with the Expert (1)
or CRJ 901 – CJ in the Big City (1)

Term 2 (15 credits)
CRJ 214 – Survival Spanish for Crim Justice (2)
CRJ 218 – Field Experience I (2)
CSC 110 – Introduction to Computers (3)
PEA Elective (1)
CRJ Concentration course (3)
MAT 110 – Math for Liberal Arts (3)
SPC 122 – Interpersonal Communication (3)

Term 3 (3 credits)
CRJ 219 – Field Experience II (3)

Term 4 (17credits)
CRJ 123 – Service Learning Project (1)
CRJ 130 – Criminal Law (3)
CRJ 207 – Drug Use and Abuse (3)
PEA Elective (1)
CRJ Concentration course: (3)
Social Science (6)

Term 5 (15 credits)
CRJ 133 – Constitutional Criminal Procedure (3)
CRJ 250 – Firearms (1)
PEA Elective (1)
CJ Concentration Course: (3)
Humanities (3)
Science (4)

## DIGITAL, SOCIAL AND BROADCAST PRODUCTIONS

(AAS – 68 credits)

Term 1 (17 credits)
ENG 105 – Composition I (3)
GRA 140 – Digital Imaging (3)
JOU 173 – Digital Photography (3)
JOU 190 – Foundations in Digital Media Marketing, Writing, and Community Engagement (3)
MMS 129 – Digital Audio & Video Prod & Editing (3)
MMS 401 – Multimedia Projects I (2)

Term 2 (17 credits)
MMS 225 – Advanced Television Production (3)
MMS 101 – Mass Media (3)
MMS 136 – Writing for Digital Media (3)
MMS 154 – TV & Radio Announcing (3)
MMS 402 – Multimedia Projects II (2)
MAT 110 – Math for Liberal Arts (3)

Term 3 (17 credits)
ART 121 – 2–D Design (4)
MMS 403 – Multimedia Projects III (2)
MMS 175 – Radio Workshop (2)
MMS 122 – Career Seminar (1)
SMM 110 – Writing for The Web (2)
SMM 100 – Introduction to Social Media (3)
SPC 101 – Fundamentals of Oral Communication (3)

Term 4 (17 credits)
BUS 161 – Human Relations (3)
MKT 110 – Principles of Marketing (3)
MMS 176 – Radio Workshop II (2)
MMS 185 – Digital Media Law and Ethics (3)
MMS 404 – Multimedia Projects IV (2)
Science (4)

## EARLY CHILDHOOD EDUCATION

(AAS – 68 credits)

Term 1 (17 credits)
ECE 112 – Portfolio Development I (1)
ECE 170 – Child Growth and Development (3)
ECE 103 – Intro to Early Childhood Education (3)
ECE 243 – Early Childhood Guidance (3)
ECE 110 – Early Childhood Professionals I (1)
ECE 133 – Child Health, Safety and Nutrition (3)
ENG 105 – Composition I (3)

Term 2 (18 credits)
ECE 111 – Early Childhood Professionals II (1)
ECE 158 – Early Childhood Curriculum I (3)
ECE 159 – Early Childhood Curriculum II (3)
ECE 221 – Infant/Toddler Care and Education (3)
ECE 262 – Early Childhood Field Experience (3)
SPC 101 – Fundamentals of Oral Communication (3)
FLS 104 – Spanish for Prof (Early Education) (2)

Term 3 (17 credits)
ECE 140 – Early Childhood Curriculum Planning (3)
ECE 290 – Early Childhood Program Admin (3)
ECE 210 – Early Childhood Professionals III (1)
ENG 106 – Composition II (3)
Humanities (3)
Science (4)

Term 4 (16.00 credits)
ECE 113 – Portfolio Development II (1)
ECE 261 – Contemporary Issues in Early Childhood (3)
ECE 278 – Early Childhood Field Experience II (3)
MAT 110 – Math for Liberal Arts (3)
Social Science (6)

## ELECTRICAL TECHNOLOGY

(AAS – 76 credits)

Term 1 (18 credits)
ELE 155 – National Electric Code I (2)
ELE 119 – Basic Electricity I (4)
ELE 181 – Residential Electric/Electronic Systems (4)
SER 114 – Blueprint Reading (1)
SER 116 – Career Seminar (1)
MAT 743 – Technical Mathematics (3)
COM 753 – Technical Communications (3)

Term 2 (18 credits)
ELE 156 – National Electrical Code II (2)
ELE 136 – Basic Electricity II (4)
ELE 354 – Commercial Electric/Electronic Systems (3)
SER 101 – Energy, Sustainability, and the Env (3)
BUS 102 – Introduction to Business (3)
ELE 195 – Motor Control (3)

Term 3 (6 credits)
ELE 946 – Electrical Technology Internship I (6)

Term 4 (18 credits)
ELE 158 – National Electrical Code III (2)
ELE 226 – Electric Motors and Generators (4)
ELE 234 – Electrical Maintenance and Safety (2)
ELT 732 – Intro to Industrial Instrumentation (3)
HCR 102 – Introduction to HVAC (3)
SER 117 – Estimating for Trades (1)
WTT 216 – Power Gen and Transmission (3)

Term 5 (16 credits)
ELE 255 – National Electrical Code IV (2)
ELE 242 – Programmable Logic Control Systems (4)
ELE 357 – Industrial Electrical/Electronic Systems (3)
BUS 161 – Human Relations (3)
ELT 493 – Industrial Networking & Data Acquisition (4)

## ENGINEERING TECHNOLOGY
(AAS – 75 credits)

Term 1 (19 credits)
CIS 141 – Computer Science (3)
COM 753 – Technical Communications (3)
EGT 114 – Intro to Engineering Technology (3)
ELE 119 – Basic Electricity I (4)
MAT 743 – Technical Mathematics (3)
SER 114 – Blueprint Reading (1)
SER 116 – Career Seminar (1)
SER 124 – Industrial Safety (1)

Term 2 (17.00 credits)
ELE 136 – Basic Electricity II (4)
ELE 195 – Motor Control (3)
ELE 242 – Programmable Logic Control Systems (4)
ELT 309 – Digital Circuits & Systems (3)
SER 101 – Energy, Sustainability and the Env. (3)

Term 3 (4 credits)
EGT 934 – Engineering Technology Internship II (4)
or EGT 946 – Engineering Technology Internship I (6)

Term 4 (19 credits)
ATR 105 – Industrial Robotics (3)
CIS 125 – Intro to Programming Logic w/ Language (3)
EGT 138 – Introduction to Fluid Power (3)
ELE 226 – Electric Motors and Generators (4)
ELT 125 – Advanced PLC (3)
ELT 732 – Introduction to Industrial Instrumentation (3)

Term 5 (16 credits)
ATR 106 – Motion Control (3)
ATR 253 – Robotic Programming (3)
BUS 161 – Human Relations (3)
EGT 156 – Electrical Control of Fluid Power (2)
ELT 493 – Industrial Networking & Data Acquisition (4)
MFG 505 – Lean Manufacturing (1)

## ENVIRONMENTAL STUDIES
(AAS – 68 credits)

Term 1 (16 credits)
EVS 114 – Environmental Studies I (4)
EVS 200 – Environmental Seminar (2)
BIO 112 – General Biology I (4)
Mathematics (3)
CSC 110 – Intro to Computers (3)
or MGT 101 – Prin. of Management (3)
or BUS 102 – Intro to Business (3)

Term 2 (17 credits)
EVS 124 – Environmental Studies II (4)
BIO 113 – General Biology II (4)
ENG 105 – Composition I (3)
SPC 101 – Fundamentals of Oral Communication (3)
Social Science (3)

Term 3 (4 credits)
EVS 941 – Environmental Studies Internship (4)

Term 4 (17 credits)
EVS 254 – Intro to Natural Resources Management (4)
CHM 151 – College Chemistry I (4)
EVS 294 – Introduction to GIS (3)
ENG 106 – Composition II (3)
Humanities (3)

Term 5 (14 credits)
EVS 264 – Natural Resource Management Tech (4)
CHM 152 College Chemistry II (4)
or BIO–186 Microbiology (4)
BUS 161 – Human Relations (3)
or PSY 111 – Introduction to Psychology (3)
or SOC 110 – Introduction to Sociology (3)
AGA 154 – Fundamentals of Soil Science (3)
or CRJ 100 – Intro to Criminal Justice (3)
or SER 101 – Energy, Sustainability & the Env. (3)

## FARM EQUIPMENT & DIESEL TECHNOLOGY
(AAS – 78 credits)

Term 1 (18 credits)
AGM 411 – Engine Repair (6)
AGM 425 – Farm Equipment Air Conditioning (4)
AGM 413 – Diesel Engine Overhaul (5)
BCA 212 – Intro to Computer Business Aps (3)

Term 2 (18 credits)
AGM 850 – Dealership Experience II (2)
AGM 430 – Differentials and Final Drives (6)
AGM 431 – Transmissions (7)
BUS 161 – Human Relations (3)

Term 3 (11 credits)
AGM 416 – Combine and Implement Repair and Adjustment (4)
AGM 420 – Fuel Systems (2)
AGM 421 – Fuel Systems Lab (3)
WEL 334 – Trade and Industry Welding (2)

Term 4 (16 credits)
AGM 114 – Hydraulics I (2)
AGM 115 – Hydraulic Components Lab (3)
AGM 116 – Fundamentals of Hydraulic (3)
AGM 117 – Fundamentals of Hydraulic Lab (2)
COM 723 – Workplace Communications (3)
MAT 772 – Applied Math (3)

Term 5 (15 credits)
AGM 303 – Electrical Components Lab (3)
AGM 851 – Dealership Experience (2)
AGM 300 – Fundamentals of Electricity (3)
AGM 301 – Fundamentals of Electricity Lab (2)
AGM 302 – Electrical Components (2)
BUS 126 – Business Principles (3)

## GAME DESIGN & DEVELOPMENT
(AAS – 72 credits)

Term 1 (18 credits)
BUS 161 – Human Relations (3)
or PSY 111 – Introduction to Psych (3)
or SOC 110 – Introduction to Sociology (3)
CIS 141 – Computer Science (3)
CIS 146 – Introduction to Video Game Development (3)
CIS 332 – Database and SQL (3)
MAT 140 – Finite Math (3)
or MAT 120 – College Algebra (3)
or MAT 121 – College Algebra (4)
NET 122 – Computer Hardware Basics (3)

Term 2 (15 credits)
CIS 147 – 3D Level Design for Games (3)
CIS 148 – 3D Modeling & Character Animation (3)
CIS 204 – Introduction to Website Development (3)
ENG 105 – Composition I (3)
NET 142 – Networking Essentials (3)
or NET 140 – Networking Essentials (4)

Term 3 (5 credits)
CIS 941 – Computer Science Practicum (5)

Term 4 (16 credits)
CIS 125 – Intro to Programming Logic w/ Language (3)
CIS 161 – C++ (3)
CIS 366 – Game Development I (3)
MAT 156 – Statistics (3)
or MAT 157 – Statistics (4)
PHS 113 Intro to Physical Science (4)
or PHY 162 – College Physics (4)

Term 5 (18 credits)
BUS 102 – Introduction to Business (3)
or CSC 110 – Introduction to Computers (3)
or CSC 116 – Information Computing (3)
CIS 367 – Game Development II (3)
ENG 106 – Composition II (3)
MMS 185 – Digital Media Law & Ethics (3)
SPC 101 – Fundamentals of Oral Communication (3)
or SPC–112 – Public Speaking (3)
or SPC 122 – Interpersonal Communication (3)
WDV 132 – Mobile Application Development (3)

## GRAPHIC DESIGN
(AAS – 69 credits)

Term 1 (16 credits)
GRA 175 – Graphic Design Principles (3)
JOU 173 – Digital Photography (3)
ART 121 – 2–D Design (4)
GRA 325 – Digital Color Theory (3)
GRA 121 – Digital Drawing (Illustrator) (3)

Term 2 (19 credits)
ART 133 – Drawing (3)
GRA 173 – Typography (3)
GRA 140 – Digital Imaging (Photoshop) (3)

GRA 801 – Graphic Design Seminar (1)
GRA 188 – Advertising Layout and Composition (3)
ENG 105 – English Composition I (3)
Humanities (3)

Term 3 (2 credits)
GRA 932 – Internship (2)

Term 4 (16 credits)
GRA 118 – Electronic Publishing (3)
GRA 802 – Graphic Design Seminar II (1)
SPC 101 – Fundamentals of Oral Communication (3)
MAT 110 – Math for Liberal Arts (3)
Social Science (3)
Instructor approved program elective (3)

Term 5 (16 credits)
GRA 141 – Digital Imaging II (3)
CIS 148 – 3-D Modeling & Character Animation (3)
GRA 162 – Web Page Graphics (3)
MMS 101 – Mass Media (3)
BIO 163 – Essentials of A&P I (4)

## HEATING, VENTILATION, & AIR CONDITIONING TECHNOLOGY

(AAS – 72 credits)

Term 1 (16 credits)
ELE 119 – Basic Electricity I (4)
HCR 102 – Introduction to HVAC (3)
HCR 112 – Heating Fundamentals (3)
SER 114 – Blueprint Reading (1)
SER 116 – Career Seminar (1)
SER 124 – Industrial Safety (1)
MAT 743 – Technical Math (3)

Term 2 (16 credits)
SER 101 – Energy, Sustainability and the Env. (3)
ELE 136 – Basic Electricity II (4)
COM 753 – Technical Communications (3)
HCR 810 – Energy Management (3)
Instructor approved business or related course (3)

Term 3 (4 credits)
HCR 932 – HVAC Internship (4)

Term 4 (18 credits)
ELE 226 – Electric Motors and Generators (4)
ELT 732 – Intro to Industrial Instrumentation (3)
HCR 205 – Air Conditioning Principles (3)
HCR 305 – Fundamentals of Refrigeration (3)
HCR 444 – HVACR Systems I (4)
SER 117 – Estimating for the Trades (1)

Term 5 (18 credits)
HCR 155 – Troubleshooting Heating Systems (3)
HCR 240 – Troubleshooting Air Conditioning Sys (3)
HCR 505 – Air Distribution (3)
HCR 125 – Oil and Hydronic Heating (3)
HCR 291 – Commercial Systems (3)
BUS 161 – Human Relations (3)

## HOTEL & RESTAURANT MANAGEMENT

(AAS – 77 credits)

Term 1 (21 credits)
HCM 104 – Applied Food Service Sanitation (4)
HCM 292 – Food Preparation (3)
HCM 591 – Housekeeping Management (3)
HCM 705 – Hospitality Club Activities I (1)
SPC 101 – Fund of Oral Communication (3)
CSC 110 – Introduction to Computers (3)
HCM 265 – Mathematics for Hospitality (3)
HSC 134 – First Aide/CPR (1)

Term 2 (20 credits)
BUS 121 – Business Communications (3)
or ENG 105 – Composition I (3)
HCM 141 – Food Production (5)
HCM 595 –Managing Front Office Oper/Night Audit (4)
HCM 707 – Hospitality Club Activities II (1)
BUS 161 – Human Relations (3)
HCM 229 – Nutrition for the Life Cycle (4)

Term 3 (18 credits)
ACC 111 – Introduction to Accounting (3)
HCM 237 – Modified Diets (4)
HCM 240 – Menu Planning and Design (2)
HCM 330 – Hospitality Personnel Management (3)
HCM 709 – H & R Club Activities III (1)
HCM 450 – Job Seeking Skills I (2)
HCM 939 – Work Experience 1 (3)

Term 4 (18 credits)
HCM 310 – Hospitality Law (3)
HCM 592 – Convention Management (3)
HCM 602 – Intro to Food & Bar Operations (3)
HCM 711 – H & R Club Activities IV (1)
MKT 110 – Principles of Marketing (3)
HCM 239 – Customer Service (2)
HCM 940 – Work Experience II (3)

## HUMAN SERVICES

(AAS – 69 credits)

Term 1 (15 credits)
DSV 125 – Behavior Management (3)
HSV 284 – Case Management (3)
ENG 105 – Composition I (3)
SPC 101 – Fundamentals of Oral Communication (3)
or SPC 112 Public Speaking (3)
or SPC 122 Interpersonal Communications (3)
PSY 111 – Introduction to Psychology (3)

Term 2 (17 credits)
DSV 160 – Counseling Skills (4)
or HSV 255 – Counseling Techniques (3)
HSV 162 – Intro to Human Disabilities & Services (3)
CSC 110 – Introduction to Computers (3)
ENG 106 – Composition II (3)
Science (4)

Term 3 (6 credits)
DSV 941 – Practicum in Human Services and Dis. Studies (3)
HSC 114 – Medical Terminology (3)

Term 4 (16 credits)
DSV 155 – Services and Vocational Planning (4)
Math (3)
BUS 161 – Human Relations (3)
SOC 115 – Social Problems (3)
PSY 121 – Developmental Psychology (3)
or CRJ 100 Intro to Crim Justice
or CRJ 201 – Juvenile Delinquency

Term 5 (15 credits)
HSV 140 – Social Work and Social Welfare (3)
SOC 200 – Minority Group Relations (3)
SOC 120 – Marriage and Family (3)
CRJ 100 Intro to Crim Justice (3)
or CRJ 201 – Juvenile Delinquency
or Math – (Statistics recommended)
SOC 160 – Intro to Social Work (3)
or SOC 110 – Intro to Sociology (3)

## PARALEGAL & LEGAL STUDIES

(AAS – 70 credits)

Term 1 (16 credits)
LGL 122 – Legal Ethics (2)
LGL 120 – Introduction to Law and Paralegal (2)
LGL 250 – Family Law (3)
LGL 230 – Criminal Law and Procedure (3)
CSC 110 – Introduction to Computers (3)
ENG 105 – Composition (3)

Term 2 (17 credits)
LGL 154 – Legal Research (4)
LGL 121 – Law Office Software (1)
LGL 180 – Torts and Litigation (3)
LGL 210 – Contract Law (3)
ENG 106 – Composition II (3)
SPC 101 – Fundamentals of Oral Communication (3)

Term 3 (19 credits)
BUS 185 – Business Law I (3)
or ACC 261 – Income Tax Accounting (3)
LGL 140 – Wills, Trusts and Estate Administration (3)
LGL 161 – Legal Writing (4)
MAT 110 – Math for Liberal Arts (3)
Humanities (3)
Social Science (3)

Term 4 (16 credits)
BUS 250 – Principles of Real Estate (3)
LGL 242 – Civil Procedure and Practice (3)
LGL 200 – American Trial Process (3)
or LGL 205 – Employment Law (3)
or ACC 131 – Principles of Accounting I (4)
or ACC 261 – Income Tax Accounting (3)
Science (4)
Social Science (3)

Term 5 (2 credits)
LGL 942 – Paralegal Practicum (2)

## POWERSPORTS & POWER EQUIPMENT TECHNOLOGY

(AAS – 79 credits)

Term 1 (18 credits)
MSE 143 – Small Engines Theory (3)
MSE 146 – Small Engines Laboratory (3)
MOT 151 – Shop Safety and Procedures (1)
MOT 153 – Fundamentals of Electricity (3)
MSE 155 – Drive System Fund Theory/Lab (3)
BUS 161 – Human Relations (3)
WEL 334 – Trade and Industry Welding (2)

Term 2 (18 credits)
COM 723 – Workplace Communications (3)
MOT 131 – Motorcycle Engine 2 & 4 Stroke Th (3)
MOT 129 – Motorcycle Engine 2 & 4 Stroke Lab (2)
MOT 139 – Motorcycle Fuel Systems (3)
MOT 144 – Drive Systems, Chassis & Suspension Theory & Lab (4)
MAT 772 – Applied Math (3)

Term 3 (7 credits)
MOT 146 – Motorcycle Ignition and Electrical Systems Theory and Lab (3)
MOT 910 – Cooperative Work Experience (4)

Term 4 (19 credits)
MOT 202 – ATV Systems (3)
MOT 203 – Motorcycle & ATV Tune Up/ Maintenance (4)
MOT 211 – Advanced Drivability & Troubleshooting (4)
MOT 240 – Dyno Analysis (2)
BUS 126 – Business Principles (3)
or BUS 102 – Intro to Business (3)
or MGT 101 – Principles of Management (3)
BCA 212 – Computer Business Applications
or CSC–110 Intro to Computers (3)

Term 5 (17 credits)
MOT 221 – Adv Electrical Diagnosis & Troubleshoot (4)
MOT 231 – Advanced Fuel Systems (4)
MOT 250 – Outdoor Power Equipment (3)
MSE 159 – Snowmobile Systems (3)
MSE 183 – Personal Watercraft Systems (3)

## SALES & MARKETING MANAGEMENT

(AAS – 69 credits)

Term 1 (17 credits)
BUS 161 – Human Relations (3)
BUS 175 – Business Seminar I (1)
MKT 140 – Principles of Selling (3)
MKT 142 – Consumer Behavior (3)
MKT 155 – Visual Merchandising (4)
MKT 290 – Professionalism I: DEX/DECA (1)
MKT 938 – On–The–Job Training (2)

Term 2 (16 credits)
ACC 111 – Introduction to Accounting (3)
MGT 101 – Principles of Management (3)
MKT 150 – Principles of Advertising (3)
MKT 110 – Principles of Marketing (3)
MKT 291– Professionalism II: DEX/DECA (1)
or MKT 293 – Professionalism IV: DEX/DECA (1)
ENG 105 – Composition I (3)

Term 3 (5 credits)
BUS 932 – Internship (5)

Term 4 (15 credits)
CSC 110 – Introduction to Computers (3)
SPC 101 – Fundamentals of Oral Communication (3)
MAT 110 – Math for Liberal Arts (3)
Business Electives (6 )

Term 5 (16 credits)
BIO 105 – Intro to Biology (4)
ECN 120 – Principles of Macroeconomics (3)
PHI 105 – Intro to Ethics (3)
POL 111 – American National Gov't (3)
Business Elective (3)

## SUBSTANCE ABUSE COUNSELING

(AAS – 68 credits)

Term 1 (13 credits)
HSV 284 – Case Management (3)
ENG 105 – Composition I (3)
PSY 111 – Introduction to Psychology (3)
SDV 103 – Successful Learning (1)
Math (3)

Term 2 (17 credits)
DSV 160 – Counseling Skills (4)
or HSV 225 – Counseling Techniques
PSY 121 – Developmental Psychology (3)
CRJ 207 – Drug Use and Abuse (3)
Math or Science (4)
BIO 151 – Nutrition (3)
or ENG 106 – Composition II

Term 3 (16 credits)
CSC 110 – Introduction to Computers (3)
SOC 200 – Minority Group Relations (3)
BUS 161 – Human Relations (3)
PHI 105 – Introduction to Ethics (3)
Science (4)

Term 4 (15 credits)
HSV 293 – Sub Abuse Treatment & Planning (3)
PSY 241 – Abnormal Psychology (3)
SOC 115 – Social Problems (3)
Humanities (3)
SPC 101 – Fundamentals of Oral Communication (3)
or SPC 112 – Public Speaking (3)
or SPC 122 – Interpersonal Communications (3)

Term 5 (7 credits)
HSV 901 – Substance Abuse Practicum I (3)
HSV 902 – Substance Abuse Practicum II (4)

## 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)
9355 113th St N, #7709
Seminole, FL 33775
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 credits)
BIO 168 – Human Anatomy & Physiology I (4)
CSC 110 – Introduction to Computers (3)
ENG 105 – Composition I (3)
HSC 114 – Medical Terminology (3)
Humanities (3)

Term 2 (16 credits)
BIO 173 – Human Anatomy & Physiology II (4)
MAT 110 –Math for Liberal Arts (3)
PSY 111 – Introduction to Psychology (3)
SOC 110 –Introduction to Sociology (3)
Elective: PSY 121 – Developmental Psychology (3)

Term 3 (6 credits)
BUS 161 – Human Relations (3)
SPC 101 – Fundamentals of Oral Communication (3)

Term 4 (17 credits)
SUR 430 – Microbiology for Surgical Technology (2)
SUR 129 – Surgical Foundations (6)
SUR 123 – Patient Care Concepts (2)
SUR 131 – Surgical Foundations Lab (4)
Elective: PHI 105 – Introduction to Ethics (3)

Term 5 (14 credits)
SDV 240 – Professional Seminar (1)
SUR 223 – Surgical Procedures (6 )
SUR 227 – Surgical Procedures Lab (2)
SUR 420 – Pharmacology for the Surgical Tech (2)
SUR 517 – Surgical Technology Practicum I (3)

Term 6 (7 credits)
SUR 519 – Surgical Technology Practicum (4)
Instructor approved elective: (3)

**VETERINARY TECHNICIAN**
(AAS – 77 credits)

Term 1 (18 credits)
AGV 103 – Introduction to Veterinary Science (3)
AGV 118 – Animal Anatomy and Physiology I (4)
AGV 119 – Vet Medical Terminology (2)
AGV 150 – Office Procedures for Veterinary Tech (3)
AGV 189 – Small Animal Clinic Observation (2)
AGV 267 – Dosage Calculations for Vet Tech (1)
SPC 101 – Fundamentals of Oral Communication (3)

Term 2 (18 credits)
AGV 112 – Animal Anatomy & Physiology II (4)
AGV 145 – Animal Nutrition (3)
AGV 161 – Animal Nursing I (3)
AGV 167 – Veterinary Clinic Pathology I (3)
AGV 183 – Large Animal Clinic Observation (2)
MAT 110 – Math for Liberal Arts (3)

Term 3 (7 credits)
BUS 161 – Human Relations (3)
AGV 932 – Internship (4)

Term 4 (16 credits)
AGC 210 – Employment Seminar (1)
AGV 158 – Veterinary Law and Ethics (3)
AGV 162 – Animal Nursing II (3)
AGV 168 – Veterinary Clinic Pathology II (3)
AGV 170 – Veterinary Anesthesiology (3)
ENG 105 – Composition I (3)

Term 5 (18 credits)
AGV 140 – Veterinary Pharmacology (3)
AGV 177 – Animal Nursing III (4)
AGV 187 – Veterinary Computer Applications (3)
AGV 188 – Veterinary Clinic Pathology III (4)
AGV 239 – VTNE Review and Prep (1)
Social Science or Humanities (3)

**WATER QUALITY TECHNICIAN**
(AAS – 75 credits)

Term 1 (17 credits)
EVS 173 – Introduction to Water Resources (3)
ELE 119 – Basic Electricity I (4)
BIO 112 – General Biology I (4)
MAT 743 – Technical Math (3)
SER 114 – Blueprint Reading (1)
SER 116 – Career Seminar (1)
SER 124 – Industrial Safety (1)

Term 2 (17 credits)
SER 101 – Energy, Sustainability & the Environment (3)
ELE 136 – Basic Electricity II (4)
SER 230 – Maintenance & Repair of Pumps & Valves (3)
BIO 113 – General Biology II (4)
EVS 225 – Collection & Distribution Systems (3)

Term 3 (6 credits)
EVS 946 – Water Quality Internship (6)

Term 4 (18 credits)
CSC 110 – Intro to Computers (3)
or MGT 101 – Principles of Management (3)
or BUS 102 – Intro to Business
ELE 226 – Electric Motors and Generators (4)
EVS 275 – Water Analysis (5)
COM 753 – Technical Communications (3)
BUS 161 – Human Relations (3)
or PSY 111 – Introduction to Psychology
or SOC 110 – Introduction to Sociology

Term 5 (17 credits)
EVS 274 – Water Processing (5)
EVS 284 – Wastewater Treatment (5)
ELE 242 – Programmable Logic Control Systems (4)
ELE 195 – Motor Control (3)

**WIND ENERGY & TURBINE TECHNOLOGY**
(AAS – 73 credits)

Term 1 (19.00 credits)
ELE 119 – Basic Electricity I (4)
MAT 743 – Technical Math (3)
SER 116 – Career Seminar (1)
WTT 104 – Introduction to Wind Energy (4)
WTT 116 – Field Training I (4)
COM 753 – Technical Communications (3)

Term 2 (17 credits)
EGT 146 – Basic Hydraulics (3)
ELE 136 – Basic Electricity II (4)
WTT 136 – Field Training II (4)
ELE 195 – Motor Control (3)
SER 101 – Energy, Sustainability & the Environment (3)

Term 3 (4 credits)
WTT 934 – Wind Energy & Turbine Tech. Internship II (4)
or WTT 946 – Wind Energy & Turbine Tech. Internship I (6)

Term 4 (15 credits)
ELT 309 – Digital Circuits and Systems (3)
WTT 216 – Power Generation and Trans (3)
ELE 234 – Electrical Maintenance and Safety (2)
ELT 732 – Intro to Industrial Instrumentation (3)
ELE 226 – Electric Motors and Generators (4)

Term 5 (18 credits)
ELE 242 – Programmable Logic Control Sys (4)
MGT 101 – Principles of Management (3)
WTT 204 – Wind Turbine Siting (4)
ELT 493 – Industrial Networking and Data Acquisition (4)
BUS 161 – Human Relations (3)
or PSY 111 – Introduction to Psychology (3)
or SOC 110 – Introduction to Sociology (3)

# TECHNICAL PROGRAMS- 1 YEAR

Technical programs are those which include at least the equiva lent 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
Administrative Support Specialist
Business Specialist
Construction Technology
Early Childhood Education
Graphic Specialist
Heating, Ventilation, & Air Conditioning Tech
Hospitality Services
Marine Service Technology
Massage Therapy
Medical Assistant Specialist
Medical Office Technology
(Accepting new students Fall 2022)
Parts Sales & Inventory Control
Photography Specialist
Powersports & Power Equipment Technology
Practical Nursing
Sales and Marketing
Surgical Technology
Water Quality Technician
Welding
Wind Energy and Turbine Technology

## ACCOUNTING

(Diploma – 35 credits)

Term 1 (14 credits)
ACC 131 – Principles of Accounting I (4)
ENG 105 – Composition I (3)
CSC 110 – Introduction to Computers (3)
BUS 175 – Business Seminar I (1)
BUS 161 – Human Relations (3)

Term 2 (15 credits)
ACC 132 – Principles of Accounting II (4)
ACC 161 – Payroll Accounting (3)
ACC 311 – Computer Accounting (3)
BUS 115 – Business Correspondence (2)
SPC 101 – Fundamentals of Oral Communication (3)

Term 3 (6 credits)
ACC 702 – Certified Bookkeeper Review (4)
ACC 929 – Individual Projects (2)

## ADMINISTRATIVE SUPPORT SPECIALIST

(Diploma – 40 credits)

Term 1 (22 credits)
ACC 111 – Introduction to Accounting (3)
ADM 116 – Keyboarding II (3)
ADM 132 – Business Math and Calculators (2)
ADM 254 – Business Professionalism (1)
ADM 936 – Occupational Experience (5)
BUS 160 – Human Relations (2)
CSC 110 – Introduction to Computers (3)
SPC 101 – Fundamentals of Oral Communication (3)

Term 2 (18 credits)
ACC 161 – Payroll Accounting (3)
ACC 310 – Computer Accounting (2)
ADM 162 – Office Procedures (3)
ADM 255 – Business Professionalism II (1)
BCA 134 – Word Processing (3)
BCA 185 – Beginning Webpage Development (3)
ENG 105 – Composition I (3)

## BUSINESS SPECIALIST

(Diploma – 35 credits)

Term 1 (17 credits)
ACC 111 – Introduction to Accounting (3)
ADM 116 – Keyboarding II (3)
ADM 132 – Business Math and Calculators (2)
or BUS 110 – Business Math and Calculators (3)
ADM 254 – Business Professionalism (1)
BUS 160 – Human Relations (2)
CSC 110 – Introduction to Computers (3)
SPC 101 – Fundamentals of Oral Communication (3)

Term 2 (18 credits)
ACC 161 – Payroll Accounting (3)
ADM 255 – Business Professionalism II (1)
ACC 310 – Computer Accounting (2)
or ACC 311 – Computer Accounting (3)
ADM 162 – Office Procedures (3)
BCA 134 – Word Processing (3)
BCA 185 – Beginning Webpage Development (3)
or BCA 218 – Adv Microsoft Office Applications (3)
ENG 105 – Composition I (3)

## CONSTRUCTION TECHNOLOGY

(Diploma – 42 credits)

Term 1 (18 credits)
CON 113 – Construction Print Reading (2)
CON 195 – Foundations and Concrete (5)
CON 201 – Framing Techniques and Lab I (2)
CON 218 – Framing Techniques and Lab II (4)
CON 300 – Optimum Value Engr–Adv. Framing (1)
CON 217 – Exterior Finishing (3)
HSC 134 – First Aid/CPR (1)

Term 2 (18 credits)
CON 106 – Construction Welding (1)
or CON 120 – Construction Estimating (1)
CON 238 – Techniques of Exterior Covering (4)
COM 725 – Workplace Comm Ess. (2)
or ENG 105 – Composition I (3)
CON 228 – Methods of Interior Finishing and Lab (3)
CON 229 – Installation of Interior Finishing (3)
BUS 161 – Human Relations (3)
MAT 770 – Applied Math (2)

Term 3 (6 credits)
CON 431 – Construction Internship I (6)

## EARLY CHILDHOOD EDUCATION

(Diploma – 35 credits)

Term 1 (17 credits)
ECE 112 – Portfolio Development I (1)
ECE 170 – Child Growth and Development (3)
ECE 103 – Intro to Early Childhood Education (3)
ECE 221 – Infant/Toddler Care and Education (3)
ECE 110 – Early Childhood Professionals I (1)
ECE 133 – Child Health, Safety and Nutrition (3)
ENG 105 – Composition I (3)

Term 2 (18 credits)
ECE 111 – Early Childhood Professionals II (1)
ECE 158 – Early Childhood Curriculum I (3)
ECE 159 – Early Childhood Curriculum II (3)
ECE 243 – Early Childhood Guidance (3)

ECE 262 – Early Childhood Field Experience (3)
SPC 101 – Fundamentals of Oral Communication (3)
FLS 104 – Spanish for Prof (Early Education) (2)

## GRAPHIC SPECIALIST

(Diploma – 35 credits)

Term 1 (15 credits)
GRA 140 – Digital Imaging (3)
GRA 121 – Digital Drawing (3)
GRA 118 – Electronic Publishing (3)
JOU 173 – Digital Photography (3)
MMS 101 – Mass Media (3)

Term 2 (18 credits)
CIS 148 – 3-D Modeling & Character Animation (3)
GRA 188 – Advertising Layout and Composition (3)
GRA 141 – Digital Imaging II (3)
ENG 105 – Composition I (3)
MAT 110 – Math for Liberal Arts (3)
Program Elective (3)

Term 3 (2 credits)
GRA 932 – Internship (2)

## HEATING, VENTILATION, & AIR CONDITIONING TECHNOLOGY DIPLOMA

(Diploma – 39 credits)

Term 1 (18 credits)
ELE 119 – Basic Electricity I (4)
HCR 102 – Introduction to HVAC (3)
HCR 112 – Heating Fundamentals (3)
HCR 205 – Air Conditioning Principles (3)
SER 116 – Career Seminar (1)
SER 124 – Industrial Safety (1)
MAT 743 – Technical Math (3)

Term 2 (21 credits)
BUS 161 – Human Relations (3)
COM 753 – Technical Communications (3)
HCR 125 – Oil and Hydronic Heating (3)
HCR 155 –Troubleshooting Heating Sys (3)
HCR 240 – Troubleshooting Air Condit (3)
HCR 291 – Commercial Systems (3)
HCR 505 – Air Distribution (3)

## HOSPITALITY SERVICES

(Diploma – 41 credits)

Term 1 (21 credits)
HCM 104 – Applied Food Service Sanitation (4)
HCM 292 – Food Preparation (3)
SPC 101 – Fund. of Oral Communications (3)
CSC 110 – Intro to Computers (3)
HCM 265 – Mathematics for Hospitality (3)
HCM 591 – Housekeeping Management (3)
HCM 705 – Hospitality Club Activities I (1)
HSC 134 – First Aide/CPR (1)

Term 2 (20 credits)
BUS 161 – Human Relations (3)
BUS 121 – Business Communications (3)
or ENG 105 – Composition I (3)
HCM 141 – Food Production (5)
HCM 595 – Managing Front Ofc Oper/Night Audit (4)
HCM 707 – Hospitality Club Activities II (1)
HCM 229 – Nutrition for the Life Cycle (4)

## MARINE SERVICE TECHNOLOGY

(Diploma – 45 credits)

Term 1 (19 credits)
MSE 147 – Introduction to Marine Service (2)
MSE 149 – Introduction to Marine Rigging (2)
MSE 153 – Fund of Electricity (3)
MSE 154 – Intro to Power Generators (1)
MSE 183 – Personal Watercraft Systems (3)
MSE 151 – Shop Safety and Procedures (1)
MSE 164 – Marine Engines 2 & 4-Stroke Theory (2)
MSE 165 – Marine Engines 2 & 4-Stroke Theory L (2)
BUS 161 – Human Relations (3)

Term 2 (17 credits)
COM 723 – Workplace Communications (3)
MSE 148 – Introduction to Marine Detailing (1)
MSE 169 – Marine Drive Systems Theory and Lab (3)
MSE 173 – Marine Fuel Systems (3)
MSE 159 – Snowmobile Systems (3)
MSE 190 – Marine Electrical Systems (4)

Term 3 (9 credits)
MSE 932 – Internship (6)
MAT 772 – Applied Math (3)

## MASSAGE THERAPY

(Diploma – 39 credits)

Term 1 (16 credits)
HSC 114 – Medical Terminology (3)
MST 101 – Health and Wellness – MT (1)
MST 103 – Intro to Swedish Massage (3)
MST 110 – Pathology for Massage Therapy (2)
MST 152 – Chair Massage (1)
BIO 163 – Essentials of Anatomy and Physiology (4)
COM 725 – Workplace Communications Essentials(2)

Term 2 (15 credits)
MST 113 – Kinesiology/Anatomy & Movement for Massage Therapy (3)
MST 138 – Spa Bodywork I (3)
MST 143 – Intermediate Massage (3)
MST 150 – Adapting to Special Populations (2)
SDV 240 – Professional Seminar (1)
MST 153 – Deep Tissue Massage Essentials (3)

Term 3 (8 credits)
BUS 160 – Human Relations (2)
MST 121 – Reflexology (1)
MST 123 – Sports Massage (3)
MST 159 – Ethics – Massage Therapy (1)
MST 810 – Massage Clinic (1)

## MEDICAL ASSISTANT SPECIALIST

(Diploma – 44 credits)

The Medical Assistant Diploma, Spencer Campus, is 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 Endow-ment (AAMAE). Commission on Accreditation of Allied Health Education Programs (CAAHEP) 1361 Park Street Clearwater, FL 33756. Phone: 727-210-2350

Term 1 (20 credits)
BIO 168 – Human Anatomy & Physiology I (4)
CSC 110 – Introduction to Computers (3)
COM 725 – Workplace Comm. Ess. (2)
or ENG 105 – Composition I (3)
HSC 114 – Medical Terminology (3)
MAP 111 – Medical Office Management I (3)
MAP 342 – Clinical Assisting I (3)
MAP 512 – Medical Assisting Pharmacology (2)

Term 2 (20 credits)
BIO 173 – Human Anatomy & Physiology II (4)
HSC 217 – Introduction to Pathology (3)
MAP 117 – Medical Office Management II (3)
MAP 128 – Automated Medical Office (2)
MAP 233 – Medical Laboratory Procedures (4)
SDV 240 – Professional Seminar (1)
MAP 343 – Clinical Assisting II (3)

Term 3 (4 credits)
HSC 192 – Emergency Preparedness (1)
MAP 941 – Medical Assistant Practicum (3)

## MEDICAL OFFICE TECHNOLOGY

(Diploma – 41 credits)
(Accepting new students beginning FA/22)

Term 1 (20 credits)
BIO 168 – Human Anatomy & Physiology I (4)
CSC 110 – Introduction to Computers (3)
COM 725 – Workplace Comm. Essentials (2)
or ENG 105 – Composition I (3)
HIT 244 – Basic CPT-Coding (3)
HSC 114 – Medical Terminology (3)
MAP 111 – Medical Office Management I (3)
MAP 512 – Medical Assisting Pharmacology (2)

Term 2 (21 credits)
ADM 220 – Career Development Skills (1)
BIO 173 – Human Anatomy & Physiology II (4)
BUS 110 – Business Math and Calculators (3)
HIT 242 – Coding I (ICD-10) (3)
HIT 601 – Medical Transcription (2)
HSC 217 – Introduction to Pathology (3)
MAP 128 – Automated Medical Office (2)
MAP 141 – Medical Insurance (3)

## PARTS SALES & INVENTORY CONTROL
(Diploma – 41 credits)

Term 1 (19 credits)
CSC 110 – Introduction to Computers (3)
MAT 772 – Applied Math (3)
MKT 140 – Principles of Selling (3)
PAR 113 – Parts Catalog and Lab (3)
PAR 123 – Parts System and Lab (4)
Instructor approved Elective (3)

Term 2 (17 credits)
ACC 111 – Introduction to Accounting (3)
BUS 161 – Human Relations (3)
COM 725 – Workplace Comm Ess. (2)
MGT 101 – Principles of Management (3)
MKT 150 – Principles of Advertising (3)
PAR 124 – Inventory Control and Lab (3)

Term 3 (5 credits)
BUS 932 – Internship (5)

## PHOTOGRAPHY SPECIALIST
(Diploma – 36 credits)

Term 1 (16 credits)
JOU 171 – Introduction to Photography (3)
JOU 173 – Digital Photography (3)
ENG 105 – Composition I (3)
SPC 101 – Fundamentals of Oral Communication (3)
Science (4)

Term 2 (20 credits)
ART 286 – Photography & Portraiture (3)
BUS 161 – Human Relations (3)
JOU 177 – News & Advertising Photography (3)
JOU 941 – Journalism & Photography Practicums (2)
JOU 180 – Digital Imaging for Professionals (3)
or GRA 141 – Digital Imaging II (3)
MGT 110 – Small Business Management (3)
or MGT 101 – Principles of Management (3)
MKT 150 – Principles of Advertising (3)
or MKT 140 – Principles of Selling (3)

## POWERSPORTS & POWER EQUIPMENT TECHNOLOGY
(Diploma – 43 credits)

Term 1 (18 credits)
MSE 143 – Small Engines Theory (3)
MSE 146 – Small Engines Laboratory (3)
MOT 151 – Shop Safety and Procedures (1)
MOT 153 – Fundamentals of Electricity (3)
MSE 155 – Drive System Fund Theory/Lab (3)
BUS 161 – Human Relations (3)
WEL 334 – Trade and Industry Welding (2)

Term 2 (18 credits)
COM 723 – Workplace Communications (3)
MOT 131– Motorcycle Engines 2 & 4 Stroke Theory (3)
MOT 129 – Motorcycle Engines 2& 4 Stroke Lab (2)
MOT 139 – Motorcycle Fuel Systems (3)
MOT 144 – Drive Systems, Chassis & Suspension Theory & Lab (4)
MAT 772 – Applied Math (3)

Term 3 (7 credits)
MOT 146 – Motorcycle Ignition and Electrical Systems Theory and Lab (3)
MOT 910 – Cooperative Work Experience (4)

## PRACTICAL NURSING
(Diploma – 46 credits)

Program Prerequisites (7 credits)
BIO 168 – Human Anatomy & Physiology I (4)
HSC 172 – Nurse Aide (3)

Term 1 (16 credits)
BIO 173 – Human Anatomy & Physiology II (4)
BIO 151 – Nutrition (3)
PNN 105 – Practical Nursing Concepts I (7)
PNN 135 – PN Pharmacology I (1)
HSC 151 – Dosage Calculations (1)

Term 2 (15 credits)
PSY 121 – Developmental Psychology (3)
PNN 106 – Practical Nursing Concepts II (8)
PNN 136 – PN Pharmacology II (2)
HSC 202 – Health Informatics (2)

Term 3 (8 credits)
COM 725 – Workplace Communications (2)
PNN 107 – Practical Nursing Concepts III (6)

## SALES & MARKETING
(Diploma – 38 credits)

Term 1 (17 credits)
BUS 161 – Human Relations (3)
BUS 175 – Business Seminar I (1)
MKT 140 – Principles of Selling (3)
MKT 142 – Consumer Behavior (3)
MKT 155 – Visual Merchandising (4)
MKT 290 – Professionalism I: DEX/DECA (1)
MKT 938 – On-The-Job Training (2)

Term 2 (16 credits)
ACC 111 – Introduction to Accounting (3)
MGT 101 – Principles of Management (3)
MKT 150 – Principles of Advertising (3)
MKT 110 – Principles of Marketing (3)
MKT 291 – Professionalism II: DEX/DECA (1)
ENG 105 – Composition I (3)

Term 3 (5 credits)
BUS 932 – Internship (5)

## 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 (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

Program pre-requisites: (7 credits)
HSC 114 – Medical Terminology (3)
BIO 163 – Ess. of Anatomy and Physiology w/Lab (4)
or BIO 168/173 – Human Anatomy & Phy. I/II (8)

Term 1 (16 credits)
SUR 123 – Patient Care Concepts (2)
SUR 129 – Surgical Foundations (6)
SUR 131 – Surgical Foundations Lab (4)
SUR 430 – Microbiology For Surgical Tech (2)
COM 725 – Workplace Comm. Ess. (2)

Term 2 (14 credits)
SDV 240 – Professional Seminar (1)
SUR 227 – Surgical Procedures Lab (2)
SUR 223 – Surgical Procedures Lecture-Course (6)
SUR 420 – Pharmacology for the Surgical Tech (2)
SUR 517 – Surgical Technology Practicum I (3)

Term 3 (7 credits)
BUS 161 – Human Relations (3)
SUR 519 – Surgical Technology Practicum (4)

## WATER QUALITY TECHNICIAN
(Diploma – 38 credits)

Term 1 (18 credits)
EVS 173 – Introduction to Water Resources (3)
SER 116 – Career Seminar (1)
ELE 119 – Basic Electricity I (4)
EVS 275 – Water Analysis (5)
MAT 743 – Technical Math (3)
SER 114 – Blueprint Reading (1)
SER 124 – Industrial Safety (1)

Term 2 (20 credits)
SER 230 – Maintenance & Repair of Pumps & Valves (3)
COM 753 – Technical Communications (3)

EVS 274 – Water Processing (5)
or EVS 284 – Wastewater Treatment (5)
ELE 195 – Motor Control (3)
EVS 225 – Collection & Distribution Systems (3)
BUS 161 – Human Relations (3)
or PSY 111 – Introduction to Psychology (3)
or SOC 110 – Introduction to Sociology (3)

**WELDING**
(Diploma – 38 credits)

Term 1 (18 credits)
BUS 161 – Human Relations (3)
WEL 121 – Oxy Fuel Welding and Cutting (4)
WEL 228 – Intro to Welding, Safety & Health of Welders (1)
WEL 233 – Print Reading and Welding Symbol Interpretation (3)
WEL 254 – Welding Inspection & Testing Principles (1)
WEL 274 – Shielded Metal Arc Welding I (3)
WEL 275 – Shielded Metal Arc Welding II (3)

Term 2 (20 credits)
COM 725 – Workplace Comm Ess. (2)
MAT 770 – Applied Math (2)
WEL 179 – Special Processes/ Procedures (3)
WEL 244 – Gas Metal Arc Welding Short Circuit Transfer (2)
WEL 245 – Gas Metal Arc Welding Spray Transfer (2)
WEL 251 – Gas Tungsten Arc Welding for Carbon Steel (2)
WEL 252 – Gas Tungsten Arc Welding for Aluminum (1)
WEL 253 – Gas Tungsten Arc Welding for Austenitic Stainless Steel (1)
WEL 310 – Pipe Welding (5)

**WIND ENERGY & TURBINE TECHNOLOGY**
(Diploma – 43 credits)

Term 1 (19 credits)
ELE 119 – Basic Electricity I (4)
MAT 743 – Technical Math (3)
SER 116 – Career Seminar (1)
WTT 104 – Introduction to Wind Energy (4)
WTT 116 – Field Training I (4)
COM 753 – Technical Communications (3)

Term 2 (20 credits)
EGT 146 – Basic Hydraulics (3)
ELE 136 – Basic Electricity II (4)
WTT 136 – Field Training II (4)
ELE 195 – Motor Control (3)
SER 101 – Energy, Sustainability & the Environment (3)
BUS 161 – Human Relations (3)
or PSY 111 – Introduction to Psychology (3)
or SOC 110 – Introduction to Sociology (3)

Term 3 (4 credits)
WTT 934 – Wind Energy & Turbine Technology Internship II (4)
or WTT 946 – Wind Energy & Turbine Technology Internship (6)

# 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 credits)
ACC 221 – Cost Accounting (3)
or ACC 261 – Income Tax Accounting (3)
ACC 131 – Principles of Accounting I (4)
ACC 161 – Payroll Accounting (3)
ACC 929 – Individual Projects (2)
BUS 175 – Business Seminar I (1)
CSC 110 – Introduction to Computers (3)

Term 2 (12 credits)
ACC 132 – Principles of Accounting II (4)
ACC 310 – Computer Accounting (2)
or ACC 311 – Computer Accounting (3)
ACC 702 – Certified Bookkeeper Review (4)
BUS 115 – Business Correspondence (2)
or BUS 121 – Business Communications (3)

**WELDING CERTIFICATE**
(Cert – 21 credits)

Term 1 (21 credits)
BUS 161 – Human Relations (3)
WEL 121 – Oxy Fuel Welding and Cutting (4)
WEL 179 – Special Processes/ Procedures (3)
WEL 244 – Gas Metal Arc Welding Short Circuit Transfer (2)
WEL 245 – Gas Metal Arc Welding Spray Transfer (2)
WEL 251 – Gas Tungsten Arc Welding for Carbon Steel (2)
WEL 252 – Gas Tungsten Arc Welding for Aluminum (1)
WEL 253 – Gas Tungsten Arc Welding for Austenitic Stainless Steel (1)
WEL 275 – Shielded Metal Arc Welding II (3)

# 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.

| ABC | 123 |
|---|---|
| Discipline prefix of program or subject | 000–099 developmental courses |
| | 100–899 courses intended to meet specific requirements for certificates, diplomas, and degrees in career and technical and transfer programs |

Key to Course Prefixes

| | |
|---|---|
| ACC | Accounting |
| ADM | Administrative Assistant |
| ADN | Associate Degree Nursing |
| AGA | Agriculture–Agronomy |
| AGB | Agriculture–Farm Management |
| AGC | Agriculture–Comprehensive |
| AGM | Agriculture–Mechanics |
| AGP | Agriculture–Precision Ag |
| AGS | Agriculture–Animal Science |
| AGV | Agriculture–Vet Tech |
| ANT | Anthropology |
| ART | Art |
| ATR | Automation Tech & Robotics |
| AUT | Automotive Technology |
| AVI | Aviation |
| BCA | Business Computer Applications |
| BIO | Biology |
| BUS | Business |
| CHM | Chemistry |
| CIS | Computer Programming |
| CLS | Cultural Studies |
| COM | Communication |
| CON | Construction |
| COS | Cosmetology |
| CRJ | Criminal Justice |
| CSC | Computer Science |
| DRA | Film and Theatre |
| DSV | Disability Services |
| ECE | Early Childhood Education |
| ECN | Economics |
| EDU | Education |
| EGT | Engineering Technology |
| ELE | Electrical Technology |
| ELT | Electronics |
| ENG | English Composition |
| ENV | Environmental Science |
| EVS | Environmental Studies |
| FIN | Finance |
| FLF | Foreign Language–French |
| FLS | Foreign Language–Spanish |
| GEO | Geography |
| GRA | Graphic Communications |
| HCM | Hospitality Culinary & Mgmt |
| HCR | Heating, Vent, & Air Cond. |
| HIS | History |
| HIT | Health Information Technology |
| HSC | Health Sciences |
| HSV | Human Services |
| JOU | Journalism |
| LGL | Legal Assistant |
| LIT | Literature |
| MAP | Medical Assistant |
| MAT | Mathematics |
| MFG | Manufacturing |
| MGT | Management |
| MKT | Marketing |
| MMS | Mass Media Studies |
| MOT | Motorcycle Technology |
| MSE | Marine Service Technology |
| MST | Massage Therapy |
| MUA | Music–Applied |
| MUS | General Music |
| NET | Computer Networking |
| PAR | Parts Dist.& Inv.Control |
| PEA | Physical Education Activities |
| PEC | Coaching/Officiating |
| PEH | General Phys Ed and Health |
| PET | Physical Education Training |
| PEV | Intercollegiate Phys Education |
| PHI | Philosophy |
| PHS | Physical Science |
| PHY | Physics |
| PNN | Practical Nursing |
| POL | Political Science |
| PSY | Psychology |
| RDG | Reading |
| REL | Religion |
| SDV | Student Development |
| SER | Sustainable Energy Resources |
| SMM | Social Media & Marketing |
| SOC | Sociology |
| SPC | Speech |
| SUR | Surgical Technology |
| WDV | Web Development |
| WEL | Welding |
| WTT | Wind Energy & Turbine Tech |

# COURSE DESCRIPTIONS

## ACCOUNTING

ACC 111 – Intro to Accounting, (3 credits)
Introduces the basic principles of accounting and the recoding 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 credits)
The course examines the accounting methods, principles and terminology needed in the preparation and analysis of financial statements. Included is a study of partnership accounting.

ACC 132 – Principles of Accounting II, (4 credits)
Continuation of ACC 131, covering corporate accounting, long-term debts, financial analysis, managerial accounting, and budgeting concepts. Prerequisite: ACC 131.

ACC 161 – Payroll Accounting, (3 credits)
This introductory course covers the processes of completing payroll records and implementing payroll procedures. Topics include methods of computing compensation, state and federal laws affecting payroll, mandatory and voluntary payroll deductions, methods of keeping records, and preparation of internal and governmental reports. Prerequisite: ACC 131

ACC 221 – Cost Accounting, (3 credits)
This course develops an understanding of accounting methods for manufacturing and service enterprises. Included are analysis techniques for management's use of accounting data to aid in product costing, performance measuring, budgeting and other operating decision. Prerequisite: ACC 132

ACC 231 – Intermediate Accounting I, (4 credits)
The course 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, inventory, depreciation, cash flows, and notes and accounts receivable. Prerequisite: ACC 132

ACC 232 – Intermediate Accounting II, (4 credits)
The course is a continuation of ACC 231, including an in-depth analysis of the theory and practice of financial accounting for liabilities and equity. Other topics include earnings per share, deferred taxes, pension, leases, accounting changes, error corrections and cash flow. Prerequisite: ACC 231

ACC 261 – Income Tax Accounting, (3 credits)
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. Prerequisite: ACC 131 and ACC 132

ACC 310 – Computer Accounting, (2 credits)
This course provides students with a basic understanding of the accounting cycle on microcomputers. Topics include general ledgers, accounts receivable and payable, payroll, inventory and depreciation.

ACC 311 – Computer Accounting, (3 credits)
This course is designed to provide hands-on approach to learning how modern computerized accounting systems function. This application includes the following: general ledger, accounts payable, accounts receivable, bank reconciliation, budgeting, purchase order processing and inventory, sales order processing and inventory, fixed assets, and payroll.

ACC 702 – Certified Bookkeeper Review, (4 credits)
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 credits)
Provides experience in the application of accounting principles to a simulated retail business. P/Q grading.

ACC 941 – Practicum, (3 credits)
On-the-job training experience provides the opportunity to apply accounting concepts and procedures in a business setting and to develop proper work attitudes.

## ADMINISTRATIVE ASSISTANT

ADM 116 – Keyboarding II, (3 credits)
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 credits)
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 credits)
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 254 – Business Professionalism, (1 credit)
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 credit)
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 credit)
A course designed to continue introducing leadership topics and discussion which will increase the professional level of business students. Students will have the opportunity to take part in leadership development, such as activities of the Iowa Lakes chapter of Business Professionals of America. This is a continuation of ADM 255.

ADM 355 – Business Professionalism IV, (1 credit)
A course designed to continue introducing leadership topics and discussion which will increase the professional level of business students. Students will have the opportunity to take part in leadership development activities, such as activities of the Iowa Lakes chapter of Business Professionals of America. This is a continuation of ADM 354.

ADM 936 – Occupational Experience, (5 credits)
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.

ADM 941 – Practicum, (5 credits)
Practical field experience arranged to include office work, direct leadership, and procedures related to career work. Prerequisite: Permission of the instructor.

## ASSOCIATE DEGREE NURSING

ADN 111 – Nursing Concepts I, (7 credits)
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 212 – Nursing Concepts II, (7 credits)
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 peri-operative, 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. Prerequisite: Successful completion of first semester ADN courses (C or better)

ADN 213 – Pharmacology Applications, (4 credits)
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. Pre-requisite: Successful completion of first semester ADN courses (C or better)

ADN 314 – Nursing Concepts III, (7 credits)
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, intra cranial 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. Prerequisite: Successful completion of second semester ADN courses (C or better)

ADN 413 – Behavioral Health Concepts, (4 credits)
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. Prerequisite: Successful completion of second semester ADN courses (C or better)

ADN 414 – Maternal Newborn Concepts, (4 credits)
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. Prerequisite: Successful completion of first semester ADN courses (C or better)

ADN 415 – Nursing Concepts IV, (7 credits)
Nursing Concepts IV is a class/clinical or class/preceptor-ship 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 through-out the lifespan using evidence-based practice interventions while demonstrating positive communication. Management of simple to complex human needs including: oxygenation, perfusion, intra cranial 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. Prerequisite: Successful completion of third semester ADN courses (C or better)

## AGRICULTURE-AGRONOMY

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

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

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

AGA 284 – Pesticide Application Cert, (3 credits)
Preparation for the student to pass the state of Iowa Commercial Pesticide Applicator Manual examination. Includes the safe use and handling of pesticides.

AGA 287 – Commercial Pesticide Ap Certification, (3 credits)
Preparation for the student to pass the State of Iowa Commercial Pesticide Applicators Manual (CORE) Examination. Includes the safe use and handling of pesticides.

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

AGA 353 – Advanced Soil Fertility, (2 credits)
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 credit)
Students will identify weed and insect pests affecting corn and soybeans along with developing recommendations for potential treatment programs.

AGA 375 – Integrated Crop Management, (2 credits)
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 credit)
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 credits)
This course introduces the basics of professional selling in the agricultural environment. It involves preparing and making a sales presentation for an agricultural product that involves both a written and oral communication component. Topics covered include methods of selling, steps and techniques in the selling process, preparing a product summary and pre-call sheet, prospecting customers, methods for closing a sale, and sales management in agriculture.

AGB 210 – Agricultural Law, (2 credits)
This course is designed to provide students with basic information of concepts and terminology used in agricultural law and the legal system and where to find resources for legal materials. Topics covered in the course include laws that relate to agriculture, specific laws in agriculture, the use of leases and contracts, tax basics, and how this information applies to real life situations.

AGB 281 – Computerized Agricultural Accounting, (1 credit)
Preparation for using a versatile computerized farm accounting system.

AGB 327 – Principles of Farm Business Management, (2 credits)
This course includes current principles and practices of farm business management. Topics include strategic planning, decision making, production enterprise budgets, partial budgets, and cash flow budgets.

AGB 436 – Grain Merchandising, (2 credits)
Studies livestock and grain futures marketing methods including product quality, methods and options.

AGB 437 – Commodity Marketing, (3 credits)
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 credit)
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 credits)
This course is a study of the terminology and tools of agricultural finance. It emphasizes the use of credit, preparation of financial documents, evaluating financial condition, and discusses financial risk strategies.

## AGRICULTURE-COMPREHENSIVE

AGC 100 – Agricultural Computer Applications, (3 credits)
This course includes basic knowledge of computer hardware, software and operation with an agriculture emphasis. Students will explore agricultural related applications.

AGC 111 – Basic First Aid/Life Support, (1 credit)
This course teaches American Red Cross basic first aid and American Heart Association cardiopulmonary resuscitation (CPR). Students will obtain a 10-Hour Occupational Health and Safety Association (OSHA) card, included in this training: tractor safety, chemical safety, and livestock safe handling practices.

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

AGC 317 – Agricultural Field Studies, (1 credit)
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 credits)
AGC 939 – Occupational Experience IV, (variable credits)
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 applying skills and technologies developed in the classroom.

## AGRICULTURE-MECHANICS

AGM 102 – Farm Equipment Maintenance, (1 credit)
The course includes basic machinery maintenance and adjustment of farm equipment.

AGM 114 – Hydraulics I, (2 credits)
A study of hydraulic components, including trouble-shooting, removal, repair and replacement.

AGM 115 – Hydraulic Components Lab, (3 credits)
This course studies troubleshooting, repairing, removing, and replacing hydraulic components. Corequisite: AGM 114.

AGM 116 – Fundamentals of Hydraulic, (3 credits)
This course studies basic hydraulic laws and principles as they apply to the farm equipment mechanics repair industry.

AGM 117 – Fundamentals of Hydraulic Lab, (2 credits)
The course focuses on testing hydraulic systems on farm equipment. Corequisite: AGM 116

AGM 203 – Ag Welding, (2 credits)
Introduction to electric, gas, wire and oxyacetylene welding.

AGM 300 – Fundamentals of Electricity, (3 credits)
This course studies basic laws and principles of electricity as they apply to the farm equipment repair industry.

AGM 301 – Fundamentals of Electricity Lab, (2 credits)
This lab course applies electrical laws and principles by examining electrical systems of farm equipment. Corequisite: AGM 300.

AGM 302 – Electrical Components, (2 credits)
This course studies electrical components of farm equipment, including repair and replacement.

AGM 303 – Electrical Components Lab, (3 credits)
This lab covers troubleshooting, repairing, removing and replacing electrical components. Corequisite: AGM 302

AGM 411 – Engine Repair, (6 credits)
This course covers the theory and operation of a basic agricultural engine.

AGM 413 – Diesel Engine Overhaul, (5 credits)
This course covers the fundamentals of engine over-haul with the emphasis on diesel engines.

AGM 416 – Combine & Implement Repair & Adjustment, (4 credits)
This course covers the maintenance and adjustment of harvesting, planting, tillage, and spraying equipment.

AGM 420 – Fuel Systems, (2 credits)
Study of technical principles and their application to fuel injection systems and turbo chargers, including diagnostics, adjustments, and overhaul procedures.

AGM 421 – Fuel Systems Laboratory, (3 credits)
This course covers the application of technical principles to fuel systems and turbo chargers, including diagnosis, adjustments, and rebuilding procedures. Corequisite: AGM 420.

AGM 425 – Farm Equip Air Conditioning, (4 credits)
This course covers the theory, diagnosis and service of the complete air conditioning system as applied to farm equipment.

AGM 430 – Differentials and Final Drives, (6 credits)
This course covers the technical principles and their application to drive shafts, universal joints, differentials, differential locks, final drives, and power take off, including diagnosis, repair, adjustment, and overhaul procedures.

AGM 431 – Transmissions, (7 credits)
This course covers the theory, operation, construction, and service procedures for transmissions.

AGM 850 – Dealership Experience II, (2 credits)
The dealership experience is a four-week block in which each student works as a full-time mechanic in a farm implement dealership.

AGM 851 – Dealership Experience, (2 credits)
This dealership experience is the second four-week block in which each student works as a full-time mechanic in a farm implement dealership.

## AGRICULTURE-PRECISION AG

AGP 242 – Precision Ag Applications, (2 credits)
An introduction to the use of Global Positioning System (GPS) as it impacts agricultural producers. Students will use field mapping software and Unmanned Aerial Vehicle (UAV) as part of the class. Students will gain an understanding of these technologies and analyze their economic impact.

AGP 329 – Intro to GPS, (3 credits)
This course is an introduction to the uses of Global Positioning Systems (GPS) and Variable Rate Technology (VRT) as they impact agricultural producers. Students will use field mapping software and/or GPS as part of the class.

## AGRICULTURE-ANIMAL SCIENCE

AGS 113 – Survey of the Animal Industry, (3 credits)
This course is an introduction in animal science including various species and breeds of domestic animals and gives them an appreciation for the principles of production, biological principles, stewardship, and animal industries as they relate to animal production in the U .S . and the world.

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

AGS 242 – Animal Health, (3 credits)
This course provides information about the cause, nature, prevention, and treatment of common health problems of farm animals. Topics include identifying animal behavior and developing a herd health program.

AGS 319 – Animal Nutrition, (3 credits)
Nutritional principles, digestive systems, composition and nutritional characteristics of common feedstuffs, ration formulation and recommended feeding programs for farm animals.

AGS 350 – Artificial Insemination of Cattle, (1 credit)
To provide students with hands on skills in artificial insemination in beef cows.

AGS 400 – Swine Production I, (2 credits)
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 credits)
Course deals with swine management concerns in confinement operations.

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

AGS 522 – Swine Grower/Finisher Management, (2 credits)
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 credits)
Provides an in-depth background for utilizing basic swine management principles.

AGS 556 – Intro to Beef Cow Production, (2 credits)
This is an introductory course to gain an understanding of the beef cow industry in Iowa and the United States. Students will gain skills of nutrition, economics, and forage utilization through classroom and laboratory activities.

AGS 557 – Advanced Beef Cow Production, (2 credits)
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 credits)
Classroom and farm lab instruction covering establishment, management, economics and nutritional value of forage systems for ruminant animals.

AGS 559 – Beef Feedlot Production, (2 credits)
This course introduces students to various aspects of the cattle feeding industry in Iowa and the world with emphasis in the feeder cattle segment of the industry including cattle trends, facilities, nutrition, health, and management.

AGS 561 – Adv Beef Production, (2 credits)
This course brings together all phases of beef feedlot enterprises as they relate to the management areas of marketing, production goals, record systems, record analysis, and carcass quality.

AGS 562 – Farm Enterprise Beef Feedlot, (1 credit)
A hands-on lab where students gain skills in feeding management of beef enterprises. A course designed to familiarized students with animal environment and adaptation, animal health, and animal behavior as it relates to production and non-production species.

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

AGS 564 – Farm Enterprise Forage Management, (1 credit)
Provide students with hands on skills in the management of forages.

AGS 565 – Farm Enterprise Swine Tech, (1 credit)
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 credit)
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 credits)
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 credits)
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 credits)
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 credits)
Introduction to word parts, directional terminology, and analysis of common veterinary terms.

AGV 140 – Veterinary Pharmacology, (3 credits)
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 credits)
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 Vet. Technicians, (3 credits)
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 credits)
Discusses 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 credits)
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 credits)
This course is a continuation of Animal Nursing I. Covers foundation material in pre- and post-surgical care, surgical assisting, fluid therapy, dental prophylaxis, anesthesiology, and basic nursing skills. Clinic and hospital record keeping are covered with an introduction to practical radiology. Prerequisite: AGV-161.

AGV 167 – Veterinary Clinic Pathology I, (3 credits)
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 credits)
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. Prerequisite: AGV 167

AGV 170 – Veterinary Anesthesiology, (3 credits)
This course involves the study of pharmacology, application of anesthetic agents, the physiological effects and means of monitoring them, principles and administration of inhalant anesthetics, and a broad overview of anesthetic protocol and care. Emphasis will be on anesthetic practical skills and anesthesia equipment. Prerequisite: AGV 161, AGV 167

AGV 177 – Animal Nursing III, (4 credits)
This course is a continuation of Animal Nursing II. Emphasis is on radiology, dentistry, emergency care, record keeping, anesthesiology and surgical assistance. Prerequisite: AGV 162.

AGV 183 – Large Animal Clinic Observation, (2 credits)
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 credits)
This course reintroduces 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. Prerequisite: AGV 150

AGV 188 – Veterinary Clinic Pathology III, (4 credits)
Refinement of hematology and other skills acquired in Veterinary Clinical Pathology II. Additional units include urinalysis, electrocardiography, necropsy, cytology, parasitology, and specialized clinical procedures. Prerequisite: AGV 168

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

AGV 239 – VTNE Review and Preparation, (1 credit)
This course will help students review material from the Veterinary Technician Program and prepare to take the Veterinary Technician National Exam. Emphasis will be placed on the domains of the VTNE. VTNE sample questions will be utilized for student practice. Prerequisite: AGV 168, AGV 162

AGV 267 – Dosage Calculations for Veterinary Technicians, (1 credit)
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 credits)
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 105 – Cultural Anthropology, (3 credits)
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 credits)
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 credits)
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 credits)
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 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 credits)
Introductory course using electronic media as applied to specific problems in illustration, with an emphasis on creating pathways from hand drawn comprehensives to finished digital output. Various traditional media are used for references for digitally produced illustrations.

ART 133 – Drawing, (3 credits)
The course uses a variety of approaches and techniques to develop and 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 credits)
The course is a continuation of ART 133 designed to continue the development and enhancement of the student's drawing skills. Further exploration and experimentation with alternative drawing materials and methods will be encouraged. Prerequisite: ART 133.

ART 143 – Painting, (3 credits)
The course explores 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 credits)
Continuation of ART 143 with emphasis on a more personal approach regarding technique and imagery. Prerequisite: ART 143.

ART 173 – Ceramics, (3 credits)
The course is a studio class providing exploratory experiences in forming, firing, and decorating clay.

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

ART 286 – Photography: Portraiture, (3 credits)
Introduction to the art of portrait photography. Prerequisite: JOU 173

## AUTOMATION TECH AND ROBOTICS

ATR 105 – Industrial Robotics, (3 credits)
Industrial Robotics covers the pertinent subjects to understanding how robots work and how they are programmed. It covers the aspects of robot motion and how a robot can be integrated and synchronized with other counterparts in a manufacturing environment. Prerequisite: ELE 136

ATR 106 – Motion Control, (3 credits)
This course provides the student with an understanding of the concepts, terminology, functionality, and applications of motion control. This course will provide the foundation for learning the skills necessary to maintain and program motion control systems. Topics include servo motors, stepper motors, motion controllers, feedback systems and servo-mechanisms. Prerequisite: ELT 125

ATR-253 Robotic Programming, (3 credits)
Robotic Programming is a course that will cover the development of robotic applications and common basic programming instructions used in industrial robotic platforms. Prerequisite: ATR 105

## AUTOMOTIVE TECHNOLOGY

AUT 104 – Introduction to Automotive Technology, (3 credits)
The course provides an introduction to the maintenance of automotive systems including tires, batteries, lighting, belts, hoses, filters, and cooling systems. Information on automotive careers is also introduced.

AUT 115 – Automotive Shop Safety, (1 credit)
The course is designed to prepare the student to work safely in the auto shop. Students will be introduced to safety equipment, safety rules, and common accidents in the automotive service area.

AUT 180 – Engine Repair Theory, (3 credits)
The course provides instruction on the operation, diagnosis, and repair procedures of the automotive internal combustion engine.

AUT 184 – Brakes Lab, (3 credits)
The course provides experience in the operation, diagnosis, and repair procedures of the automotive braking system.

AUT 186 – Engine Repair Lab, (3 credits)
The course provides experience in the operation, diagnosis, and repair procedures of the automotive internal combustion engine.

AUT 212 – Automatic Transmissions/Transaxles Theory, (4 credits)
The course introduces the theory of the operation of transmission hydraulic and mechanical systems.

AUT 213 – Automatic Transmissions/Transaxles Lab, (3 credits)
This course provides experience in the repair and replacement of transmissions and transaxles.

AUT 260 – Manual Transmission Theory, (3 credits)
The course includes the theory of operation, diagnostic principles, and repair procedures used in the automotive manual transmission, trans-axle, and drive train systems.

AUT 313 – Manual Transmission Lab, (3 credits)
The course provides experience in the operation and proper repair of manual transmissions, transaxles, and drive trains used in late model vehicles.

AUT 412 – Automotive Suspension/Steering Theory, (3 credits)
The course provides instruction on the design, operating principles, service, and alignment procedures of automotive and light truck steering and suspension systems.

AUT 413 – Auto Suspension/Steering Lab, (3 credits)
The course includes the operation and service of power and manual steering gears, rack and pinion systems, and suspension systems. In addition, training on four-wheel alignment and adjustment is covered.

AUT 510 – Brakes Theory, (2 credits)
The course introduces the theory of operation, diagnosis, and repair procedures related to automotive braking systems.

AUT 600 – Intro to Electrical Systems and Testing, (3 credits)
This course provides knowledge of the fundamentals of electricity along with electrical testing procedures and equipment.

AUT 608 – Automotive Electrical, (3 credits)
The course is designed to provide the knowledge and skills necessary to diagnose and repair automotive electrical systems.

AUT 651 – Advanced Automotive Electrical, (3 credits)
This course is designed to provide the knowledge and skills necessary to diagnose and repair the computer-controlled systems used in automobiles.

AUT 704 – Auto Heating & Air Conditioning, (4 credits)
The course is a study of the operation, diagnostics, and of the heating, ventilation, and air conditioning systems used in the automotive industry.

AUT 827 – Auto Ignition Systems, (4 credits)
The course focuses on the operation, diagnosis, and repair procedures used to service automotive ignition systems.

AUT 834 – Auto Fuel Systems, (4 credits)
The course focuses on the diagnostic and repair procedures used to service the automotive fuel system.

AUT 842 – Auto Computerized Eng Controls, (4 credits)
The course focuses on the operation, diagnosis, and repair procedures for electronic engine control systems used in the automotive industry.

AUT 851 – Auto Eng Performance Diagnosis, (3 credits)
The course provides experience in using critical thinking skills to formulate rapid and accurate diagnoses of automotive drivability systems.

AUT 890 – Automotive Technology OJT, (4 credits)
Automotive Technology on-the-job training (OJT) provides the student with work experience and introduces them to the responsibilities and necessary skills of the modern automotive technician.

## AVIATION

AVI 129 – Employ Prep Aviation Careers, (1 credit)
The course prepares students for the careers in the aviation industry.

AVI 140 – Private Pilot Ground School, (4 credits)
The course prepares students for the Federal Aviation Administration (FAA) Private Pilot Knowledge Exam. Corequisite: AVI 180

AVI 180 – Private Pilot Flight Lab I, (3 credits)
The course prepares students for the Federal Aviation Administration (FAA) Private Pilot Practical Test. Corequisite: AVI 140

AVI 212 – Instrument Ground School, (4 credits)
The course includes ground school instruction in instrument procedures and operations. Prerequisite: AVI 140. Corequisite: AVI 245

AVI 245 – Instrument Rating Flight Lab, (3 credits)
The course prepares students for the Federal Aviation Administration (FAA) Instrument Rating Practical Test. Prerequisite: AVI 180. Corequisite: AVI 212

AVI 246 – Commercial Pilot Flight Lab, (3 credits)
The course prepares students for the Federal Aviation Administration (FAA) Instrument Rating Practical Test. Corequisite: AVI 261

AVI 248 – Commercial Pilot Flight Lab, (5 credits)
The course prepares students for the Federal Aviation Administration (FAA) Commercial Pilot Practical Test. Prerequisite: AVI 180. Corequisite: AVI 261.

AVI 261 – Commercial Pilot Ground School, (3 credits)
The course prepares students for the Federal Aviation Administration (FAA) Commercial Pilot Knowledge Exam. Corequisite: AVI 248

AVI 300 – Flight Instructor Ground School, (3 credits)
The course prepares students for the Federal Aviation Administration (FAA) Fundamentals of Instruction Knowledge Exam and Flight Instructor Airplane Knowledge Exam. Prerequisite: AVI 248. Corequisite: AVI 350

AVI 301 – Instrument Instructor, (1 credit)
The course prepares students for the Federal Aviation Administration (FAA) Instrument Instructor Practical Test.

AVI 350 – Flight Instructor Flight Lab, (3 credits)
The course prepares students for the Federal Aviation Administration (FAA) Flight Instructor Practical Test. Prerequisite: AVI 248. Corequisite: AVI 300

AVI 400 – Multi-Engine Rating, (1 credit)
The course prepares students for the Federal Aviation Administration (FAA) Multi-Engine Instructor Practical Test.

AVI 405 – Multi-Engine Rating, (3 credits)
The course prepares students for the Federal Aviation Administration (FAA) Multi-Engine Rating Practical Test.

AVI 406 – Multi-Engine: Flight Instructor Flight Lab, (1 credit)
This course prepares the student for the FAA Multi-Engine Instructor Add-On rating. The student will take the FAA flight test at completion of the course.

AVI 407 – Multi-Engine: Commercial Rating Flight Lab, (1 credit)
The course prepares students for the Federal Aviation Administration (FAA) Multi-Engine (Commer-cial) Rating Practical Test.

AVI 928 – Independent Study, (1 credit)
Advanced Flight training in Complex, High Performance, Multi- Engine, or Tail-wheel aircraft.

AVI 941 – Practicum, (1 credit), (3 credits), (5 credits)
The course provides on-the-job training in an aviation position.

## BUSINESS COMPUTER APPLICATIONS

BCA 134 – Word Processing, (3 credits)
The essentials of word processing and the use of text-editing equipment.

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

BCA 185 – Beginning Web-page Development, (3 credits)
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 credits)
In a Windows environment, the focus of this course is to use hardware and software as business productivity tools. Training includes a hands-on introduction to computer applications vital in business and industry. The course covers computer terminology, operating system, email, and Internet applications. Hands on training is provided for software business applications including word processing, spreadsheet, database, and presentation software.

BCA 218 – Adv. Microsoft Office Apps, (3 credits)
Provide students with broad understanding of management information systems in the business environment. Offers more detailed hands-on uses of application programs such as word processing, database management and spreadsheets in preparation for careers in business. Prerequisite: CSC 110 or BCA 212

## BIOLOGY

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

BIO 112 – General Biology I, (4 credits)
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 credits)
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 credits)
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 credits)
This course provides the student with the 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 credits)
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 credits)
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 credits)
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 credits)
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. Prerequisites: BIO 105, BIO 112, BIO 163, BIO 168, AGV 118 or higher.

## BUSINESS

BUS 102 – Intro to Business, (3 credits)
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 credits)
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 credits)
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 credits)
The course emphasizes correct grammar, punctuation, spelling and tone as applicable to written business communications, letters and memos Included are techniques for writing informational, persuasive, sales, and good and bad news messages.

BUS 121 – Business Communications, (3 credits)
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 credits)
This course is an introduction to fundamentals of business, including evaluations, typical forms of business, accounting, management styles, marketing and customer service skills. Concepts of business and management functions, organizational considerations, and decision-making processes, are studied.

BUS 130 – Intro to Entrepreneurship, (3 credits)
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 credits)
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 credits)
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 credits)
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 credit)
Introduces business and accounting students to career opportunities in the business world. The course includes methods of networking and the processes needed to successfully begin a career.

BUS 185 – Business Law I, (3 credits)
Business Law I 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 credits)
A continuation of BUS 185 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 credits)
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 credits)
This course provides a foundation of statistical concepts and procedures that can aid the student as both a consumer and producer of statistical information. The course emphasizes descriptive and inferential statistical methods, probability, estimation, hypothesis testing and linear regression. Students are also introduced to software as it applies to introductory statistical methods. Prerequisite: appropriate placement score.

BUS 212 – Business Statistics II, (3 credits)
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 credits)
Fundamental principles of real estate evaluation, brokerage, financing structure, construction and real estate law.

BUS 932 – Internship, (3-5 credits)
To give the student hands on experience in a business related occupation and to apply what they have learned in class to real life situation. It also will introduce them to some business activities that will be or have been covered in class.

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

BUS 949 – Special Topics, (3 credits)
Thirty-two students from the University of Iowa, University of Northern Iowa, Iowa State University, Buena Vista University and Iowa Lakes Community College will participate in an advanced study of entrepreneurship including a team-based entrepreneurial venture computer simulation, seminars with successful entrepreneurs, business and community leaders, and networking and mentoring to enhance students' understanding of entrepreneurship opportunities in Iowa .

## CHEMISTRY

CHM 151 – College Chemistry I, (4 credits)
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 credits)
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 credits)
The properties of matter in terms of modern chemical principles. The topics covered are measurements, stoichiometry, atomic structure, chemical reactions, periodic relationships, gas laws, thermo chemistry, 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 credits)
This course is an introduction to organic chemistry, and covers acids and bases, oxidation/reduction, solubility products, and nuclear chemistry, kinetics, equilibrium, thermodynamics, electro chemistry, coordination complexes, qualitative analysis. Problem solving in each of the areas is included. Micro-scale and semi-micro-scale labs are also included. Prerequisite: CHM 166

CHM 190 – Intro to Forensic Chemistry, (4 credits)
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 credits)
This is part of a yearlong rigorous survey of Organic Chemistry. Modern Organic Chemistry, including no-menclature, syntheses, structure, bonding, mechanisms and carbon and its compounds. This course is for students majoring in pre-medicine, pre-veter inary medicine, chemistry, biological sciences, and for anyone planning to take further courses in chemistry. Lecture and Laboratory. Prerequisite: CHM 176

CHM 273 – Organic Chemistry II, (5 credits)
This course is a 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 & laboratory. Prerequisite: CHM 263.

## COMPUTER PROGRAMMING

CIS 125 – Intro to Programming Logic W/Language, (3 credits)
Studies the most commonly used structured techniques of flow charting 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 credits)
Introduction to the concepts of computer programming and Graphical User Interfaces. Includes structured design techniques for modern problem solving.

CIS 143 – Advanced Computer Science, (4 credits)
This course is a continuation of program design and analysis for students with some prior programming experience. It is designed to expand students' knowledge of computer science and sharpen their programming skills. Topics to be covered include an overview of fundamental programming concepts as well as object-oriented programming techniques, classes, inheritance, graphical user interfaced, layout managers and event, exception handlers, and database connectivity. Prerequisite: CIS 141

CIS 146 – Introduction to Video Game Development, (3 credits)
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 credits)
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 credits)
This course will give students a hands-on, example-based introduction to the modeling and animation process for use in movies or games. Colors, textures, physical simulations, and key frame based animation are covered.

CIS 161 – C++, (3 credits)
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 171 – Java, (3 credits)
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 – Intro to Website Develeopment, (3 credits)
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 credits)
This course provides students with a foundation in the design, implementation, and management of database systems. This course will provide an illustration of the physical and logical representation of data using 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. The students will also discuss the role of database technology in modern industry. The students will utilize the open source MySQL database for all in-class examples and projects.

CIS 366 – Game Development I, (3 credits)
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 141

CIS 367 – Game Development II, (3 credits)
This project-based, portfolio building course expands the concepts introduced in Game Development I. There will be more emphasis on C++ code editing, under the hood, of the game engine of choice. Prerequisite: CIS 366, CIS 125

CIS 612 – Advanced Visual Basic, (3 credits)
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 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 credits), (5 credits)
Students will gain practical experience at individual workstations 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 credits)
Developing skills in reading, writing, and listening as they apply to students' vocational needs.

COM 725 – Workplace Communications Essentials, (2 credits)
Refining of skills in reading, writing, and listening as they apply to the student's vocational needs.

COM 753 – Technical Communications, (3 credits)
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 credits)
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 credit)
Welding techniques applicable to the construction trade.

CON 113 – Construction Print Reading, (2 credits)
Studies the builders' visual language and communication.

CON 120 – Construction Estimating, (1 credit)
Estimating techniques used at the lumber desk at a retail establishment.

CON 125 – Construction Estimating II, (3 credits)
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 195 – Foundations and Concrete, (5 credits)
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 credit)
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 credits)
Basic framing techniques with emphasis on identification and ap plication. Lecture and laboratory.

CON 217 – Exterior Finishing, (3 credits)
Exterior finish work on residential and commercial structures. Lecture and laboratory.

CON 218 – Framing Techniques and Lab II, (4 credits)
This course covers the framing of a structure including floor systems, exterior and interior bearing/non-bearing walls, stairways, roof systems, exterior fascia and sof-fit framing along with exterior sheathing.

CON 228 – Methods of Interior Finishing, (3 credits)
Covers interior finishing material and its installation in residential and commercial structures. Lecture and laboratory.

CON 229 – Install of Interior Finishing, (3 credits)
Covers interior wall coverings and their application as well as thermal and sound insulation. Lecture and laboratory.

CON 238 – Techniques of Exterior Covering, (4 credits)
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 credit)
This course describes and explains advanced framing techniques that are used in high energy efficient framing in residential housing construction. 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 351 – Computer Generated Blueprint and Design, (3 credits)
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 credits)
On-the-job training to gain experience in the student's field of interest.

CON 932 – Internship, (3 credits)
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.

## COSMETOLOGY

COS 111 – Cosmetology Theory I, (6 credits)
This first course, also known as basic training, is required before advancement in Cosmetology. This course is designed to introduce and develop an understanding of the various realms of cosmetology. Students will develop skills relating to haircutting, haircoloring, hairstyling, nail techniques, and personal growth. Students will cultivate their passions within the field of cosmetology.

COS 117 – Cosmetology Theory II, (5 credits)
Theory II continues to build student knowledge and abilities in the salon. Students will develop skills relating to haircutting, haircoloring, hairstyling, nail techniques, facials, and makeup application. Students will also engage with clients, developing the necessary skills to be a successful cosmetologist.

COS 118 – Applied Cosmetology Skills II, (6 credits)
This is the second practicum in Cosmetology. Students will continue developing skills in haircutting, haircoloring, hairstyling, nail techniques, sanitation, and facials. Students will cultivate their passion within the field of cosmetology. Students will also engage with clients, developing the necessary skills to be a successful cosmetologist.

COS 130 – Cosmetology Theory III, (5 credits)
Cosmetology Theory III continues to build student knowledge of salon services, the scope of practice, proper sanitation procedures, and salon management. Prerequisite: COS 117

COS 159 – Practical Cosmetology Skills I, (6 credits)
This first practicum in cosmetology is required before advancement in the program. The student will demonstrate proper hygiene, good grooming, sanitation techniques, and basic cosmetology procedures. Protection of the student and public are emphasized. Corequisite: COS 110

COS 172 – Practical Cosmetology Skills III, (6 credits)
Practical Cosmetology Skills III continues to provide student practice with salon services, the scope of practice, proper sanitation procedures, and salon management. Prerequisite: COS 118

## CRIMINAL JUSTICE

CRJ 100 – Intro to Criminal Justice, (3 credits)
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 credits)
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 credits)
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 credits)
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 credit)
This course provides the student with the opportunity to become engaged in a community service project.

CRJ 130 – Criminal Law, (3 credits)
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 133 – Constitutional Criminal Procedure, (3 credits)
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 credits)
Examines the law in the correctional setting with obligations of correctional workers. Prerequisite: CRJ 120

CRJ 141 – Criminal Investigation, (3 credits)
Covers fundamentals of investigation including interviewing and interrogating; collecting and preserving evidence; modus operandi; crime scene search; etc.

CRJ 170 – Overview of Cybercrime, (3 credits)
This course identifies and discusses the nature of the successful cybercrime investigation and the proper preparation for trial. Students will have a better understanding of current technology used in these crimes.

CRJ 200 – Criminology, (3 credits)
Scientific study of the nature and causes of criminal behavior and social deviance.

CRJ 201 – Juvenile Delinquency, (3 credits)
Juvenile justice system is examined from historical constitutional and operational perspectives. Theories concerning juvenile delinquency are explored.

CRJ 207 – Drug Use and Abuse, (3 credits)
Designed to help the student understand sociological aspects of drug use, abuse, and treatment.

CRJ 208 – Introduction to Private Security, (3 credits)
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 credits)
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 credits)
This course is designed to provide preparation to students for on- the-job experience in a criminal justice related field. The student will also learn certain requirements within the criminal justice profession. This class prepares you for Field Experience II, student internship. Prerequisite: CRJ 100

CRJ 219 – Field Experience II, (3 credits)
Continuation of CRJ 218 Field Experience I. This is an internship course. Speak with instructor or see syllabus for prerequisites.

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

CRJ 250 – Firearms, (1 credit)
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 credit)
Supplemental enrichment course related to Criminal Justice which may include special projects or papers.

CRJ 901 – CJ in the Big City, (1 credit)
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 credits)
Course for students who wish to take all their experience at one time.

## COMPUTER SCIENCE

CSC 110 – Intro to Computers, (3 credits)
CSC 110 is an introductory course that surveys a variety of topics to include history, hardware, software, terminology, communications, computer ethics, and societal impact of computers. In addition to computer literacy, students will complete hands-on modules using operating systems, word processing, database, presentation, and spreadsheet software, such as Microsoft Office programs.

CSC 116 – Information Computing, (3 credits)
This course presents the basic concepts of information systems and computer literacy. The course incorporates theory as well as hands-on practice which focuses on spreadsheets and database management systems (DBMS).

## FILM AND THEATRE

DRA 101 – Intro to Theatre, (3 credits)
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 credits)
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 credits)
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 155 – Services & Vocational Planning, (4 credits)
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 credits)
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/Disab St., (2 credits), (3 credits)
Practical field experience in phases of operation and duties relating to human services, Para education, health or rehabilitation. Focus is program writing, data collection, documentation, job skills, and participant outcome.

DSV 941 – Practicum, (3 credits), (4 credits), (6 credits)
Practical field experience in phases of operation and duties relating to human services, Para education, 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 credits)
Gives students a historical and philosophical foundation of the field of early childhood education. Includes an overview of assessment and trends that influence best practices. Explores careers in the field. Addresses influences of families and diversity.

ECE 106 – Child Development Associate Standards, (1 credit)
Assists the eligible CDA credential candidate with developing and preparing for the Preschool, Infant–Toddler, or Family Child Care CDA validation visit and assessment. Prerequisites: ECE 103, ECE 133 & ECE 243

ECE 110 – Early Childhood Professionals I, (1 credit)
Emphasizes problem solving skills and team building through a variety of group activities. Prerequisite: enrollment in Early Childhood Education program

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

ECE 112 – Portfolio Development I, (1 credit)
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.

ECE 113 – Portfolio Development II, (1 credit)
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

ECE 133 – Child Health, Safety, and Nutrition, (3 credits)
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 credits)
Examines and evaluates early childhood curriculum and methods leading to the development and implementation of appropriate curricula for young children.

ECE 158 – Early Childhood Curriculum I, (3 credits)
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 credits)
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 credits)
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 credit)
This course emphasizes problem solving skills and team building through a variety of group activities. Prerequisite: ECE 111

ECE 221 – Infant/Toddler Care and Education, (3 credits)
Focuses on care, education, and assessment of children from birth to thirty–six months. Prepares students to utilize developmentally appropriate practices including responsive care giving, 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 credits)
Focuses on developmentally appropriate, evidence–based approaches and positive guidance strategies for supporting the development of each child. Emphasizes supportive interactions and developmentally appropriate environments. Uses assessment to analyze and guide behaviors. Studies impact of family, and each child's culture, language and ability on child guidance.

ECE 261 – Contemporary Issues in Early Childhood Education, (3 credits)
An in–depth study of current political, economic, social, and cultural events and their impact on children and childcare.

ECE 262 – Early Childhood Field Experience, (3 credits)
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 170; Corequisites: ECE 158 & ECE 159

ECE 278 – Early Childhood Field Experience II, (3 credits)
This a supervised experience of at least 80 contact hours in a selected early childhood setting serving children ages birth through eight. Prerequisites: ECE 210 & ECE 262

ECE 290 – Early Childhood Program Admin, (3 credits)
Covers the basic principles involved in setting up, equipping, and administering a childcare center. Emphasis is on business procedures, insurance, funding, state and federal regulations, staff and community relations, record keeping, policy writing, program evaluation and childcare advocacy.

## ECONOMICS

ECN 120 – Principles of Macroeconomics, (3 credits)
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 credits)
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 credits)
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 credits)
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 217 – Introduction to Education Lab, (1 credit)
Students will complete 40 hours of observation and assistance in a K-12 setting.

EDU 235 – Children's Literature, (3 credits)
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 credits)
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 138 – Intro to Fluid Power, (3 credits)
This course will introduce students to the basic principles and components of fluid power systems including hydraulics and pneumatics. Students will also learn how to read fluid power schematics and troubleshoot basic systems.

EGT 146 – Basic Hydraulics, (3 credits)
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 156 – Electrical Control of Fluid Power, (2 credits)
This course covers fluid power electrical controls such as solenoids, programmable controls, and servo controls. Troubleshooting and maintenance of servo valves and proportional control valves as well as other fluid power components are covered. Prerequisites: EGT 138 and ELT 125

EGT 934 – Engineering Technology Internship II, (4 credits)
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 credits)
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.

## ELECTRICAL TECHNOLOGY

ELE 119 – Basic Electricity I, (4 credits)
Electrical Theory I 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 136 – Basic Electricity II, (4 credits)
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. PreReq: ELE 119

ELE 155 – NEC I, (2 credits)
An introduction to 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 credits)
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. Prerequisite: ELE 155

ELE 158 – NEC III, (2 credits)
A continuation of the NFPA 70® National Electrical Code®. The course covers Chapters 5 and 6 of the Code, including special occupancies and equipment. Prerequisite: ELE 156

ELE 181 – Residential Electric/Electronics Systems, (4 credits)
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 183 – Electrical Practical Applications, (4 credits)
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. Prerequisite: ELE 226

ELE 195 – Motor Control, (3 credits)
This course discusses motor controls, components, operation, and service. Students will learn electric relay control of AC and DC motors along with trouble-shooting motors in an industrial application.

ELE 226 – Electric Motors & Generators, (4 credits)
Electric motors & 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.

ELE 234 – Electrical Maintenance and Safety, (2 credits)
An introduction of the NFPA 70E® Electrical Safety in the Work- place and NFPA 70B® Recommended Practice for Electrical Equipment Maintenance documents. Technicians are required to do preventive maintenance on electrical equipment and to do it safely. These documents will be used to discuss how this is to be accomplished in the workplace.

ELE 242 – Programmable Logic Control Systems, (4 credits)
Introduce students to Programmable Logic Controllers (PLC's), primarily the Siemens S7-200 processors, the Siemens LOGO smart relay processor and the Bachmann M1 Controllers. The course will provide students with experiences in the following: Numbering systems associated with programming and addressing PLC's; Hardware and software familiarization associated with PLC's; Using programming instruction sets to create and edit ladder logic programs; Troubleshooting techniques using a PLC; Troubleshooting techniques using a schematic and drawings. Prerequisite: ELE 182

ELE 255 – NEC IV, (2 credits)
A completion and review of the NFPA 70® National Electrical Code®. The course covers Chapters 7, 8, and 9 of the Code, including special conditions, communications systems, and applicable tables to the Code. Prerequisite: ELE 158

ELE 354 – Commercial Electric/Electronics Systems, (3 credits)
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 over current 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. Prerequisite: ELE 181

ELE 357 – Industrial Electrical/Electronic Systems, (3 credits)
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, over current protection, conductors, capacitors, and power quality will be discussed. Wiring methods and practices for hazardous locations will be taught in the class also. Prerequisite: ELE 354

ELE 946 – Electrical Technology Internship I, (6 credits)
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.

## ELECTRONICS

ELT 125 – Advanced PLC, (3 credits)
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. Prerequisite: ELE 242

ELT 309 – Digital Circuits & Systems (3 credits)
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

ELT 493 – Industrial Networking and Data Acquisition, (4 credits)
Foundational training in local area networking technology, protocols and installation procedures. Introduction to supervisory control and data acquisition for industrial networks. Prerequisite ELT 732

ELT 732 – Introduction to Industrial Instrumentation, (3 credits)
Comprehensive introduction to components, circuits, instruments, and control techniques used in industrial systems. Prerequisite ELE 136

## ENGLISH COMPOSITION

ENG 003 – Writing Foundations, (1 credit)
Basic writing course designed for students in certificate programs.

ENG 012 – Basic Writing, (2 credits)
Individualized course in general grammar review including usage and punctuation.

ENG 035 – Writing Strategies, (3 credits)
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 credits)
This course will prepare students for college level writing.

ENG 105 – Composition I, (3 credits)
Emphasis on expository and argumentative writings including a review of usage and mechanics. Prerequisite: satisfactory score on the ACT or Accuplacer as determined by Iowa Lakes policy.

ENG 106 – Composition II, (3 credits)
Continuation of ENG 105 with emphasis on research and documentation as well as literary analysis. Prerequisite: ENG 105

ENG 221 – Creative Writing, (3 credits)
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 credits)
This course examines the ecological principles used in the preservation

of biological diversity. Some topics explored are population dynamics, conservation genetics, island bio geography, 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.

## ENVIRONMENTAL STUDIES

### EVS 114 – Environmental Studies I, (4 credits)

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 credits)

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 credits)

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 200 – Environmental Seminar, (2 credits)

Students will learn about drafting cover letters, creating resumes, developing e-portfolios, interviewing and networking skills in this course. They will also explore a myriad of career options in the environmental field and find their best fit. Also, during this course students will become familiar with the Student manual for environmental studies practicum and understand the instructor, sponsor, and student role in cooperative education.

### EVS 205 – Water Quality Seminar, (1 credit)

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 224 – Water Distribution & Wastewater Collection Systems, (4 credits)

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. Topics covered will include hydraulics and hydrology, water distribution systems, and wastewater collection systems.

### EVS 225 – Collection and Distribution Systems, (3 credits)

This course 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 and collection systems and the procedures performed to monitor and evaluate the effectiveness of distribution and collection systems . Topics covered will include hydraulics and hydrology, water distribution systems, and wastewater collection systems.

### EVS 254 – Intro to Natural Resources Management, (4 credits)

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 credits)

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, (5 credits)

Water Processing is designed to provide the student with an 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. Topics covered will include water processing I, water processing II, water processing III, and water distribution and processing systems operation.

### EVS 275 – Water Analysis, (5 credits)

Water Analysis is designed to provide the student with a basic understanding of water pollution and its impact on water quality; the physical, chemical, and biological parameters utilized to determine the quality of water; and the laboratory techniques performed to measure those water quality parameters. Topic covered will include water quality and pollution, the analysis of physical and chemical water parameters, and the analysis of biological water parameters.

### EVS 284 – Wastewater Treatment, (5 credits)

Wastewater Treatment is designed to provide the student with the understanding of the characteristics of wastewater, technologies utilized to treat wastewater, operation of wastewater collection and treatment systems and the laboratory techniques performed to monitor and evaluate the effectiveness of wastewater treatment. Topics covered will include introduction to current issues in water and wastewater treatment operations, basics of wastewater treatment and basics of water and wastewater solids, treatment and management.

### EVS 294 – Introduction to GIS, (3 credits)

This course will introduce students to the concepts and applications of geographic information systems (GIS). Students will become familiar with using GIS software to visualize, query, create, edit, analyze and present geospatial data. There will also be exposure to public datasets available today on the internet that can be accessed. Implementing global positioning systems (GPS) will also be used in creating maps in this course.

### EVS 941 – Environmental Studies Internship, (4 credits)

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 credits)
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 credits)
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 credits)
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-FRENCH

FLF 141 – Elementary French I, (4 credits)
Introductory course for those with no prior background. Students become acquainted with the sounds and structure of French emphasizing useful vocabulary and development of basic conversational skills.

FLF 142 – Elementary French II, (4 credits)
Progressive development of French language skills with additional emphasis on reading. Prerequisite: FLF 141

## FOREIGN LANGUAGE-SPANISH

FLS 104 – Spanish for Professionals, (2 credits)
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 credits)
Introduction to the Spanish language and culture; practice in all the basic skills.

FLS 142 – Elementary Spanish II, (4 credits)
This course aims to continue development of functional proficiency in Spanish through listening, speaking, reading and writing to, and with others. Students will expand their ability to communicate in Spanish in everyday, practical situations. Prerequisite: FLS 141

FLS 241 – Intermediate Spanish I, (4 credits)
Review and expansion of grammar, selected reading and further practice in oral and written communication. Prerequisite: FLS 142

FLS 242 – Intermediate Spanish II, (4 credits)
This course develops an increasingly complex oral and written comprehension of the Spanish language, while further developing fluency in writing, speaking, listening, and reading the language. Prerequisite: FLS 241

## GEOGRAPHY

GEO 121 – World Regional Geography, (3 credits)
Introductory course in college geography dealing with location, interaction and interdependence of countries of the world.

## GRAPHIC COMMUNICATIONS

GRA 118 – Electronic Publishing, (3 credits)
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. Students will learn about the basics of design and layout, typography and about the many design tools and resources available.

GRA 121 – Digital Drawing, (3 credits)
Introduction to vector-based drawing application. Students will create both black and white and multicolor graphics using application tools and menu commands. Various projects of interest will be completed during the semester that incorporate your understanding of drawing tools, color theory, and typography.

GRA 140 – Digital Imaging, (3 credits)
This introductory course covers the core concepts associated with digital imaging. 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 credits)
This course advances the ideas and techniques taught in Digital Imaging I with an emphasis on advanced techniques. Focus will be put on the understanding of tool setting, curves, levels, blending modes, layer styles, 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 credits)
An introduction to the creation of graphics and animation for use on web pages using current software programs such as Adobe Photoshop, Illustrator, Animate, and Fireworks. This course also takes students through the entire web design process from start to finish including site definition, site mapping, wire framing, creating mock ups, initiating user tests, and exporting a final website design.

GRA 166 – Web Animations, (3 credits)
Students will programmatically create 2-dimensional animations and interactive applications through industry standard languages and platforms. Students will learn how to display graphics on a screen and move them using standard techniques and algorithms. Standard physics and trigonometric formulas will be incorporated to simulate real-world motion. Prerequisite: CIS 125

GRA 173 – Typography, (3 credits)
This course explores the fundamental principles of typography and its role in visual communication. Students will explore both the form and function of typography in design through lectures and demonstrations. Emphasis is placed on the history of type, anatomy of letter forms, and appropriate uses of type.

GRA 175 – Graphic Design Principles, (3 credits)
Students work with advanced design problems and concepts. A semester long case study of a company will result in the research, design, and production of a marketing plan, logo, research materials, and other graphic assets necessary to move the company business strategy forward.

GRA 188 – Advert Layout & Composition, (3 credits)
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 explored. Students design for web or social media platforms.

GRA 234 – Dreamweaver Level I, (3 credits)
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 Hypertext Markup Language (HTML) and Cascading Style Sheet (CSS) documents, incorporate images, work with colors and back-grounds, present data in tables, and use CSS for laying out web pages.

GRA 235 – Dreamweaver Level II, (3 credits)
This course focuses on advanced Cascading Style Sheets (CSS) and Hypertext Markup Language (HTML). Specific advanced Dreamweaver features such as templates, layout, and dynamic page functionality are discussed. The course also focuses on connecting web pages to back end databases using Hypertext Preprocessor (PHP) code. Create, read, update, and delete (CRUD) operations are implemented. Prerequisite: GRA 234

GRA 325 – Digital Color Theory, (3 credits)
This course provides insight into the effective use of color through the study of contemporary color theory including additive and subtractive color. This course involves the development of color perception, expression, and application in traditional and digital design, through a series of problem-solving exercises and projects. Fundamental student experiences, along with a historical perspective will provide insight and understanding to the intrinsic power of color in design.

GRA 801 – Graphic Design Seminar, (1 credit)
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 credit)
This class is for the student preparing to graduate. It enables the student to compile accomplished works into a quality portfolio presentation. Different types of digital portfolio systems are discussed and viewed.

GRA 932 – Internship, (2 or 4 credits)
Supervised, paid work experience in a business or industry involved in an area of graphic design.

## HOSPITALITY CULINARY & MANAGEMENT

HCM 104 – Applied Food Service Sanitation, (4 credits)
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 141 – Food Production, (5 credits)
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 229 – Nutrition for the Life Cycle, (4 credits)
Practical, 'how-to' course focusing on nutrition as it relates to personal health; foods, and food preparation; menu planning and recipe modification; and marketing of nutritious menu items in the food service industry.

HCM 237 – Modified Diets, (4 credits)
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 credits)
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 credits)
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 265 – Mathematics for Hospitality, (3 credits)
Reviews the fundamentals of mathematics, including methods of figuring percent, discount, mark-up, mark-down, and interest. Problems related to the hospitality industry.

HCM 292 – Food Preparation, (3 credits)
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 credits)
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 credits)
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 credits)
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 591 – Housekeeping Management, (3 credits)
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 credits)
A course designed to provide practical insight into the different kinds of meetings and conventions. To provide advice and suggestions on how to reach and sell to these important groups and people. To learn the traits to be a successful event planner and how to create a successful event. Will identify and define social concerns and responsibilities; along with reviewing the management functions for success in the bar beverage business.

HCM 595 – Front Office Operations/Night Audit, (4 credits)
Emphasizes the efficient operation of the front office area, including reservations, greeting guests, hotel-motel services and payments. Charge account systems and controls, billing methods, checkout procedures and a learning experience with a Front Office Management Simulation included.

HCM 602 – Introduction to Food and Bar Operations, (3 credits)
Focuses on the management of food and beverage operations in food and lodging establishments. Includes stewarding, banquets, restaurant, beverage, and room service. Prepares students for internships in food and lodging operations.

HCM 705 – Hospitality Club Activities I, (1 credit)
Developing leadership, teamwork, communication, commitment, and cooperation as required in the hospitality industry. P/Q grading.

HCM 707 – Hospitality Club Activities II, (1 credit)
Developing leadership, teamwork, communication, commitment, and cooperation as required in the hospitality industry. P/Q grading.

HCM 709 – Hospitality Club Activities III, (1 credit)
Developing leadership, teamwork, communication, commitment, and cooperation as required in the hospitality industry. P/Q grading.

HCM 711 – Hospitality Club Activities IV, (1 credit)
Developing leadership, teamwork, communication, commitment, and cooperation as required in the hospitality industry. P/Q grading.

HCM 938 – On-The-Job Training, (6 credits)
On-the-job training, usually full-time, in a hotel, motel, restaurant or related business.

HCM 939 – Workplace Experience I, (3 credits)
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 ServSafe Certification.

HCM 940 – Workplace Experience II, (3 credits)
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, HCM 939 Workplace Experience I, ServSafe Certification.

## HEATING, AIR CONDITIONING, & VENTILATION TECHNOLOGY

HCR 102 – Intro to HVAC, (3 credits)
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. Prerequisite: SER 124

HCR 112 – Heating Fundamentals, (3 credits)
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. Corequisites: HCR 102 & SER 124

HCR 125 – Oil & Hydronic Heating, (3 credits)
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. Prerequisites: HCR 112 & HCR 444

HCR 155 – Troubleshooting Heating Systems, (3 credits)
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. Prerequisites: HCR 102 & SER 124

HCR 205 – Air Conditioning Principles, (3 credits)
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. Prerequisites: HCR 102 & SER 124

HCR 240 – Troubleshooting Air Conditioning Systems, (3 credits)
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. Prerequisite: HCR 444

HCR 291 – Commercial Systems, (3 credits)
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. Prerequisite: HCR 444

HCR 305 – Fundamentals of Refrigeration, (3 credits)
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. Prerequisites: HCR 102 & SER 124

HCR 415 – Controls for HVACR, (3 credits)
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. Prerequisite: ELE 136

HCR 444 – HVACR Systems I, (4 credits)
This course presents alternative application of energy sources and equipment as they apply to heating, ventilation, air cooling, and refrigeration systems. Prerequisites: HCR 102 & SER 124

HCR 505 – Air Distribution, (3 credits)
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 air–flow measuring instruments.

HCR 810 – Energy Management, (3 credits)
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 credits)
On the job training for Heating, Air Conditioning, and Ventilation program. Prerequisite: HCR 102

## HISTORY

HIS 110 – Western Civilization: Ancient to Early Modern, (3 credits)
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 credits)
Examines an extremely dynamic phase of European and world history.

HIS 151 – U.S. History to 1877, (3 credits)
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 credits)
Covers reunion 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 credits)
This course is an introductory course in Iowa History, as it relates to national and international history. This course examines the natural environment of Iowa, as it shaped and was shaped by the native people, early settlers through the early years, statehood, World War I, the Great Depression, World War II, and more recent years. Special attention is given to ethnic groups and their contributions.

HIS 251 – U.S. History 1945 to Present, (3 credits)
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 257 – African American History, (3 credits)
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.

## HEALTH INFORMATION TECHNOLOGY

HIT 242 – Coding I (ICD–10), (3 credits)
This course is an introduction to diagnostic coding, a classification system used for identification of disease and diagnostic processes, to support medical necessity for procedures and reimbursement. Emphasis will be placed on accuracy, concepts, and compliance issues.

HIT 244 – Basic CPT Coding, (3 credits)
This course is an introduction to procedural coding, a classification system used for identification of procedures, medical supplies, and services, to correlate with diagnostic codes to support medical necessity for reimbursement. Emphasis will be placed on accuracy, coding concepts, and compliance issues.

HIT 312 – Health Informatics and Information Management Systems, (3 credits)
This course will enable the student to describe the different types of code sets and classification systems used in healthcare. It will also enable the student to understand the basic steps involved implementing and using an electronic health record and utilizing Microsoft Access to build, store, and retrieve information from a database.

HIT 601 – Medical Transcription, (2 credits)
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 multiple types of reports utilized in medical facilities. Application, proofreading as well as medical terminology and anatomy are continuous within the learning process. Prerequisites: CSC 110, HSC 114. Corequisites: BIO 168, BIO 173, or HSC 217

## HEALTH SCIENCES

HSC 109 – Exploring Health Careers & Building Teams, (3 credits)
This course is designed to provide information on career options for individuals who are interested in pursuing a career in the healthcare industry. It includes the study of team dynamics and communication techniques necessary to work and succeed in the healthcare field. Students are given opportunities for career exploration through research and projects utilizing the internet and library database. It also provides instruction in browsing the internet, using email, and other computer literacy tools necessary for taking online courses and for careers in the healthcare industry.

HSC 114 – Medical Terminology, (3 credits)
Studies medical terminology, including spelling and definitions.

HSC 134 – First Aide/CPR, (1 credit)
Emergency care for the injured. Airway management, hemorrhage control, care for shock victims, CPR/lifesaving skills. P/Q Grading

HSC 151 – Dosage Calculations, (1 credit)
Dosage Calculations emphasizes the basic math skills and dosage calculations required of nurse professionals. Prerequisite: Appropriate math placement score. P/Q grading.

HSC 172 – Nurse Aide, (3 credits)
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 hospitals. Upon satisfactory completion of the course, which

meets both federal and state requirements, the student is eligible to write the state-approved competency examination and skills test for certification.

HSC 177 – Nurse Aide II, (3 credits)
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 192 – Emergency Preparedness, (1 credit)
This course focuses on knowledge and skills to prepare and respond in emergency situations. Students will receive training in first aid techniques, cardiopulmonary resuscitation (CPR), fire safety, and emergency preparedness for natural disasters.

HSC 202 – Health Informatics, (2 credits)
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 217 – Introduction to Pathology, (3 credits)
This course provides introduction to body systems with discussion of correlating diseases and disorders, etiology, signs and symptoms, progression, and standard approaches to diagnosis and treatment.

## HUMAN SERVICES

HSV 140 – Social Work and Social Welfare, (3 credits)
Goals, values, and legal aspects of the social work professionals. Roles of social workers in human service institutions. Service learning experience at an agency is included.

HSV 162 – Intro to Human Disabilities & Services, (3 credits)
Introduces classifications, etiology, characteristics, educational and vocational considerations of persons with disabilities.

HSV 225 – Counseling Techniques, (3 credits)
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.

HSV 284 – Case Management, (3 credits)
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.

HSV 293 – Substance Abuse and Treatment Planning, (3 credits)
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.

HSV 901 – Substance Abuse Practicum I, (3 credits)
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 credits)
The course provides additional supervised experience in chemical dependency agency as approved by the program coordinator and Iowa Board of Certification for Substance Abuse.

## JOURNALISM

JOU 171 – Introduction to Photography, (3 credits)
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 credits)
Basic digital theory, how the digital camera works. Includes digital capture of both still and video; input into the computer; digital manipulation; basic Photoshop and photography; saving digital images for future use and long-term archiving. How to prepare digital images for print social media, web, and other uses and how to send digital images after formatting for upload.

JOU 177 – News and Advertising Photography, (3 credits)
This course will teach the basic photographic skills needed to create publishable news photographs using 35 mm film and digital cameras as well as basic photographic skills needed to create photographs for advertising use and basic crime scene photography. Prerequisites: JOU 171, JOU 173

JOU 180 – Digital Imaging for Professionals, (3 credits)
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. Prerequisites: JOU 171 & JOU 173.

JOU 190 – Foundations in Digital Media Marketing, Writing, and Community Engagement, (3 credits)
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 credits), (5 credits)
Practical work experience related to journalism.

## PARALEGAL & LEGAL STUDIES

LGL 120 – Intro to Law & Paralegal, (2 credits)
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 credit)
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.

LGL 122 – Legal Ethics, (2 credits)
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 credits)
A study of wills, trusts, probate procedures, estate administration taxes, and testate 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 credits)
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. Prerequisite: ENG 105 (C or Better)

LGL 161 – Legal Writing, (4 credits)
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. Prerequisite: LGL 154

LGL 180 – Torts and Litigation, (3 credits)
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 credits)
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 credits)
Study of what law applies to the Employment setting. Introduction to Employment Discrimination, Whistle blower Protection, Wage and Hours laws, Sexual Harassment, Worker's Compensation, Employer Tort Liability, Unemployment Insurance, and liability issues arising under OSHA, ERISA, and other Federal Statutes.

LGL 210 – Contract Law, (3 credits)
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 credits)
Examination of the more common crimes, criminal defenses and the procedures used to process a criminal case from arrest to final disposition.

LGL 242 – Civil Procedure & Practice, (3 credits)
Introduces students to the various practice rules of procedure in the civil court system, and the role of a paralegal at every stage of pretrial 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 credits)
Study of law and procedures relative to marriage, dissolution and adoption.

LGL 941 – Practicum, (4 credits)
Supervised work experience in a law office, legal services office, or other law-related agency.

LGL 942 – Paralegal Practicum, (2 credits)
Supervised work experience in a law office, legal services office, or other law-related agency.

## LITERATURE

LIT 101 – Intro to Literature, (3 credits)
An introduction to the study of short fiction, poetry, and drama.

LIT 110 – American Lit to Mid-1800's, (3 credits)
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 credits)
Explores major American writers and their contributions to American letters from the post-Civil War era through modern periods.

LIT 150 – World Literature I, (3 credits)
Literature from the Ancients, classical Greece, and the Renaissance.

LIT 161 – The Short Story, (3 credits)
Evolution of the short story as a literary form, with emphasis on analysis and appreciation.

LIT 184 – Young Adult Literature, (3 credits)
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 credits)
This course is designed to emphasize the functions and practices of administrative procedures in a medial 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 credits)
This course is the second of a two-course sequence that focuses on the administrative skills and techniques needed for competence as

an administrative medical office professional. Students are provided instruction in medical coding practices including diagnostic and procedural coding systems. Instruction is provided in medical billing practices involving health insurance plan options, carrier requirements, state, and federal regulations, abstracting relevant information from source documents, and completion of claim forms. Prerequisites: BIO 168 and HSC 114. Corequisites: BIO 173 and HSC 217.

MAP 128 – Automated Medical Office, (2 credits)
Through use of a simulation electronic medical record (EMR), the student will learn the basics of computerized medical patient systems. The student will be able to identify the different areas, procedures and components for medical patient computer systems as well as use the software for patient information organization and billing.

MAP 141 – Medical Insurance, (3 credits)
Students develop an understanding of various health insurance plan options and general state and federal regulations. Instruction will be given in the areas of abstracting information from source documents, applying appropriate procedure and diagnostic codes, accurately completing insurance claim forms and the process of claim submission to third party payers.

MAP 233 – Medical Laboratory Procedures, (4 credits)
Introduction to the Physician's Office Laboratory, safety measures and familiarization with the care and use of laboratory equipment. Techniques in venipuncture and capillary blood collection, laboratory specimen collection and processing. Performance of CLIA waived testing (Clinical Laboratory Improvement Amendment) including urinalysis, hematology, chemistry, immunology, and microbiology.

MAP 342 – Clinical Assisting I, (3 credits)
This course is the first of a two-course sequence that focuses on basic clinical skills and techniques needed for competency in the Medical Assistant profession. Instruction is given in obtaining vital signs, recording patient history, assisting with patient exams, aseptic and sterile techniques, assisting with minor office procedures, and medication administration.

MAP 343 – Clinical Assisting II, (3 credits)
This course is the second of a two-course sequence that focuses on the clinical skills and techniques needed for competence in the Medical Assistant profession. Instruction is given for a variety of specialty exams, including but not limited to dermatology, orthopedics, pulmonology, cardiology, women's health, pediatrics, and geriatrics.

MAP 402 – Medical Law and Ethics, (2 credits)
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 – Medical Assisting Pharmacology, (2 credits)
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 941 – Practicum, (3 credits)
The practicum provides an opportunity for students to apply classroom theory to on-the-job experiences in an ambulatory medical facility. Students will work under the supervision of clinic staff, participating in patient care activities within the administrative, clinical, and laboratory departments. Students will enhance skills by interacting with physicians, clinic staff and patients. Students are evaluated by the clinic supervisors and the practicum coordinator.

## MATHEMATICS

MAT 005 – Math Refresher, (1 credit)
Developmental studies course. Individualized course, which reviews whole numbers, fractions, decimals, percents and ratios.

MAT 054 – Math Strategies, (3 credits)
Developmental studies course that reviews whole numbers, integers, fractions, decimals, percents, ratios, proportions, and graphing utilizing basic algebra.

MAT 102 – Intermediate Algebra, (4 credits)
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 credits)
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. Prerequisite: appropriate placement score.

MAT 117 – Math for Elementary Teachers, (3 credits)
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 AS degree.

MAT 120 – College Algebra, (3 credits)
Operation of real and complex numbers; factoring; exponents; quadratic equations; inequalities; matrices; rational functions; logarithmic functions; and graphing or functions. Prerequisite: appropriate placement score.

MAT 121 – College Algebra, (4 credits)
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: appropriate placement score.

MAT 127 – College Algebra and Trig, (5 credits)
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: appropriate placement score.

MAT 140 – Finite Math, (3 credits)
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. Prerequisite: MAT 110, MAT 120, MAT 121

MAT 156 – Statistics, (3 credits)
This course provides a foundation of statistical concepts and procedures that can aid the student as both a consumer and producer of statistical information. The course emphasizes descriptive and inferential statistical methods, probability, estimation, hypothesis testing and linear regression. Students are introduced to technology as it applies to introductory statistical methods. Prerequisite: appropriate placement score.

MAT 157 – Statistics, (4 credits)
This course provides a foundation of statistical concepts and procedures that can aid the student as both a consumer and producer of statistical information. The course emphasizes descriptive and inferential statistical methods, probability, estimation, hypothesis testing and linear regression. Students are also introduced to software as it applies to introductory statistical methods. Prerequisite: appropriate placement score.

MAT 210 – Calculus I, (4 credits)
This course is the first of a series of three courses. The purpose of the sequence is to provide the student with a foundation in calculus and analytic geometry. Those students enrolled in the science, math, engineering, computer science, and similar fields, will also gain proficiency and develop an understanding how these tools will be used later on in their studies. Topics include analytic geometry, differentiation, and applications of derivation and integration. Graphing calculator required. Prerequisite: MAT 127

MAT 211 – Calculus I, (5 credits)
A general course in differential and integral calculus and its applications. Topics include limits and continuity; differentiation; application of differentiation; integration; logarithmic, exponential, and other transcendental functions; and applications of integration. Prerequisite: MAT 127 or equivalent.

MAT 217 – Calculus II, (5 credits)
Continuation of MAT 211. Integration techniques, sequences, infinite series, conic sections, parametric equations, polar coordinates, vectors, cylindrical and spherical coordinates, and vector–valued functions.

MAT 218 – Calculus III, (3 credits)
Continuation of MAT 217. Explores functions of several variables; partial derivatives; directional derivatives and gradients; multiple integration; vector analysis; and a brief look at differential equations. Prerequisite: MAT 217 or equivalent.

MAT 227 – Differential Equations with Laplace Transforms, (4 credits)
Students learn to recognize various types of differential equations and learn how their solutions behave. Topics include solving first and second order differential equations, applications, systems of equations, Laplace transforms and series solutions, existence theorems, numerical methods, and partial differential equations. Prerequisite: MAT 217

MAT 743 – Technical Math, (3 credits)
Technical Math includes operations with real numbers, use of fractions, ratios, measurement conversion, algebraic equations, functions, geometry, and right–angle trigonometry. Applications are designed around situations students may encounter in industrial settings

MAT 770 – Applied Math, (2 credits)
A review of whole numbers, fractions, decimals, percentages, linear and angular measurements, and common formulas used in each particular industry. Prerequisite: appropriate placement score.

MAT 772 – Applied Math, (3 credits)
A course in elementary mathematical skills for technicians. Topics covered include fundamental operations with whole numbers, fractions, decimals and signed numbers; percents; geometric figures and basic constructions; area and volume formulas; English/Metric systems; measurements; and basic algebraic equations and applications. Prerequisite: appropriate placement score.

## MANUFACTURING

MFG 126 – MSSC Quality Practices and Measurement, (2 credits)
Teaches students to: participate in periodic internal quality audit activities; check calibration of gages and other data collection equipment; suggest continuous improvements; inspect materials and product/process at all stages to ensure they meet specifications; document the results of quality tests; communicate quality problems; take corrective actions to restore or maintain quality; record process outcomes and trends; identify fundamentals of blueprint reading; and use common measurement systems and precision measurement tools .

MFG 505 – Lean Manufacturing, (1 credit)
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 credits)
Principles of Management provides the student with a conceptual framework for understanding the basic theories of management. Emphasis is placed on the internal and external environment, ethics, planning, goal setting, decision making, organizational structure, motivation and group dynamics, and effective control mechanisms for establishing and accomplishing business objectives.

MGT 110 – Small Business Management, (3 credits)
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 credits)
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 credits)
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 Baldridge Award will be discussed. Participants will prepare quality improvement plan for their work groups.

MGT 170 – Human Resource Management, (3 credits)
The course is a combination of theoretical and practical approaches to human resource manage-ment. Topics include, but not limited to job design, employee selection, employee development, employee appraisal, and employee termination. Federal statues relating to EEO, Affirmative Action, OSHA, and Labor Unions are explored. Employee compensation and fringe benefits packages are also discussed.

MGT 178 – Employment Law, (3 credits)
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.

## MARKETING

MKT 110 – Principles of Marketing, (3 credits)
This course is designed to give students a clear understanding of the elements of the marketing mix (4P's) and explanation of environmental issues that are employed in business to gain a competitive edge in the global economy. Includes identification of consumer and organizational needs and an understanding of the basic consumer behavior components.

MKT 140 – Principles of Selling, (3 credits)
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 credits)
This course is designed to teach the principles of consumer behavior. Topics included are the following: external influences such as culture, social class, family and situations; internal influences such as motivation, attitudes, lifestyles, and learning; various models of consumer behavior; and how consumer behavior fits into marketing strategy. We will look at what makes consumers buy what they buy, when they buy, how they buy, and why they buy. Once marketers have a better understanding of this, a more efficient and effective method of marketing can be accomplished.

MKT 150 – Principles of Advertising, (3 credits)
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 credits)
A study of the principles and elements of design and their relationship to an effective display. Hands on experience in creating effective displays and planning a visual merchandisers schedule. The students learn about display materials and store layout in relation to effective selling.

MKT 162 – Retail Merchandising, (3 credits)
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 credit)
This course helps develop competent professionals in marketing management and merchandising. Professionalism contributes to occupational competence by promoting greater understanding and appreciation for the responsibilities of citizenship in our private enterprise system.

MKT 291 – Professionalism II: DEX/DECA, (1 credit)
Continuation of the MKT 290. This course helps develop competent professionals in marketing management and merchandising. Professionalism 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 credit)
Continuation of the professional development training in DECA.

MKT 293 – Professionalism IV: DEX/DECA, (1 credit)
Continuation of MKT 292 with more opportunities for professional advancement.

MKT 938 – On-The-Job Training, (2 credits)
A course designed to give the student trainee actual work experience in the operational phases of the modern retail market. The assignment given students will be tailored to the student's needs. They include: basic merchandising, displays, cash register experience and selling to customers. Students will be under the supervision of the coordinator of the program and be assigned to work directly under a specific store manager who serves as the on-the-job-trainer.

## MASS MEDIA STUDIES

MMS 101 – Mass Media, (3 credits)
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 122 – Career Seminar, (1 credit)
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 credits)
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 136 – Writing for Digital Media, (3 credits)
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 154 – TV and Radio Announcing, (3 credits)
Students will learn to communicate effectively by using their voice and body language as a means of communicating the message. Skills in voice and articulation, acting, persuasion, and pronunciation are studies along with techniques of relaxation and vocal dynamics. Many exercises are taught to help prepare speech and vocal skills essential to broadcasting.

MMS 175 – Radio Workshop I, (2 credits)
Recognize how a radio station operates and understanding and developing quality announcing skills with a microphone

MMS 176 – Radio Workshop II, (2 credits)
Radio station operations and practices in the college radio station. The majority of the programming and performance of the station will be the responsibility of students in this course.

MMS 185 – Digital Media Law & Ethics, (3 credits)
This course will provide an overview of legal theories, principles, and rules governing digital media law. The course will explore the ethics behind the laws and actions discussed in class. At the end of the course, students will possess a working knowledge of media law, including issues relating to First Amendment rights, copyright infringement, intellectual property, defamation, libel, slander, and consumer protection, and will have critical thinking skills to examine situations from an ethical standpoint.

MMS 225 – Advanced Television Production, (3 credits)
Production of prescripted programs for the local cable public access station. Students will perform as crew members in various studio productions. Prerequisite: MMS 115.

MMS 234 – Radio Workshop, (4 credits)
Radio station operations and practices in the college radio station. The majority of the programming and performance of the station will be the responsibility of students in this course. Prerequisite: MMS 105.

MMS 401 – Multimedia Projects I, (2 credits)
Students will work in teams, design and create engage multimedia projects that incorporate various media elements such as audio and video; graphics and animation; webcasts and podcasts; radio and television broadcasting and blogs and social media presentations.

MMS 402 – Multimedia Projects II, (2 credits)
A continuation of Multimedia Projects I. Students will design and create multimedia projects that incorporate various media elements such as audio and video; graphics and animation; webcasts and podcasts; radio and television broadcasting and blogs & social media presentations. Prerequisite: MMS 401

MMS 403 – Multimedia Projects III, (2 credits)
A continuation of Multimedia Projects II MMS 402. Students will design and create multimedia projects that incorporate various media elements such as audio and video; graphics and animation; webcasts and podcasts; radio and television broadcasting and blogs & social media presentations. Prerequisite: MMS 402

MMS 404 – Multimedia Projects IV, (2 credits)
A continuation of Multimedia Projects III MMS 403. Students will design and create multimedia projects that incorporate various media elements such as audio and video; graphics and animation; webcasts and podcasts; radio and television broadcasting and blogs & social media presentations. Prerequisite: MMS 403

MMS 941 – Practicum, (2 credits)
Students accumulate 140 or more hours of work–related experience at broadcasting institutions or other approved facilities. Students gain specific skills in a practical job setting.

## MOTORCYCLE TECHNOLOGY

MOT 129 – Motorcycle Eng 2&4 Stroke Lab, (2 credits)
Engine disassembly, reassembly, operation of various motorcycle and ATV engines. Includes adjustment and testing of engines. Corequisite: MOT 131

MOT 131 – Motorcycle Engine 2&4 Stroke, (3 credits)
This course includes the construction and design of motorcycle engines, both two and four stroke. Correct service procedures, troubleshooting, failure analysis, and theory.

MOT 139 – Motorcycle Fuel Systems, (3 credits)
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: first two semesters of program.

MOT 144 – Drive Systems/Chassis/Suspension, (4 credits)
This course covers the functions, construction, and operation 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 146 – Motorcycle Ignition/Electrical Systems Theory & Lab, (3 credits)
Study of the construction, principles of operation and design of motorcycle ignition and electrical systems.

MOT 151 – Shop Safety & Procedures, (1 credit)
Safe shop practices and procedures, including safe equipment operation, proper tool usage, importance of personal protective gear and how to handle emergency situations. Corequisite: MSE 143

MOT 153 – Fundamentals for Electricity, (3 credits)
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. Corequisite: MSE 143.

MOT 202 – ATV Systems, (3 credits)
Introduction to ATV's and all their systems.

MOT 203 – Motorcycle/ATV Tune Up/Maintenance, (4 credits)
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 credits)
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 credits)
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 credits)
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 240 – Dyno Analysis, (2 credits)
This course includes Dyno usage, data analysis, and tuning.

MOT 250 – Outdoor Power Equipment, (3 credits)
An introduction to Outdoor Power Equipment.

MOT 270 – Introduction to Diesel, (2 credits)
A study of the basic diesel engine used in small horse-power applications. Diesel fuel systems, turbo charging, diesel engine maintenance, and troubleshooting.

MOT 910 – Cooperative Work Experience, (4 credits)
Student is involved in a supervised cooperative work experience in a dealership.

MOT 932 – Internship, (2 credits)
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 credits)
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 credits)
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 credits)
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 credit)
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 credits)
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 credits)
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 credit)
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 credits)
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.

MSE 153 – Fundamentals of Electricity, (3 credits)
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 credit)
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 credits)
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 dives, sprocket and chain drive, hydraulics, and hydrostatic drives. Assembly, disassembly, inspection, troubleshooting, and repair of these systems are also covered. Prerequisites: MSE 143

MSE 159 – Snowmobile Systems, (3 credits)
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 credits)
Construction and design of two- and four-stroke marine engines. Correct service procedures, trouble-shooting, failure analysis and advanced theory are covered. Prerequisite: first semester of program.

MSE 165 – Marine Engine 2 & 4 Stroke Th Lab, (2 credits)
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 credits)
This course covers operation and construction of Marine Stern- drives, Inboard Drive Systems and Out-board 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 credits)
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.

MSE 183 – Personal Water Craft Systems, (3 credits)
Theory and hands-on lab for all systems in personal watercraft including jet pumps, engines, and steering systems. Repair, troubleshooting, and service procedures are covered. Lecture and laboratory. Prerequisite: first two semesters of program.

MSE 189 – Marine Electrical Systems T/L, (3 credits)
This course will cover the principles of operation and construction of various components in the electrical systems of a Boat such as Ignition Systems, Starting Systems, Charging Systems, Tilt and Trim Systems, along with other accessories used in the Marine industry. Proper testing, troubleshooting, disassembly/reassembly, and installation of electrical components are also covered.

MSE 190 – Marine Electrical Systems, (4 credits)
This course will cover the principles of operation and construction of various components in the electrical systems of a Boat such as Ignition Systems, Starting Systems, Charging Systems, Tilt and Trim Systems, along with other accessories used in the Marine industry. Proper testing, troubleshooting, disassembly/reassembly, and installation of electrical components are also covered

MSE 252 – Marine Advanced Drivability, (3 credits)
In this course students learn how to diagnose different fuel injection systems and their problems as well as know the difference between fuel systems. Students will be able to analyze these fuel systems along with using the latest test equipment. Each student will be able to understand and explain how these systems work. You will also learn how to use failure evaluating procedures.

MSE 273 – Marine Advanced Fuel Systems, (3 credits)
In this course, students learn how to repair a wide variety of advanced fuel systems, for example, throttle body fuel injection, multi-port fuel injection systems and direct injected fuel systems. Students practice how to properly test these systems and how to diagnose each one.

MSE 286 – Marine Advanced Electrical, (3 credits)
In this course, students learn how to analyze electrical problems and procedures. Students understand how to go about trouble- shooting different electrical problems such as ignition, hard starting, low speed engine miss, engine miss firing and engine running rough. Students will also evaluate engine running problems with different computer scanners and be able to apply these skills when they complete this course.

MSE 932 – Internship, (6 credits)
On-the-job experience at a marine or small engine 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 first year of program.

## MASSAGE THERAPY

MST 101 – Health and Wellness, (1 credit)
This course will provide self-care techniques to promote wellness for the Massage Therapist profession.

MST 103 – Intro to Swedish Massage, (3 credits)
Provides a foundation for the courses of study in the Massage Therapy program.

MST 110 – Pathology for Massage Therapy, (2 credits)
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 & Movt for Mass Thpy, (3 credits)
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. Prerequisites: MST 103 & BIO 163

MST 121 – Reflexology, (1 credit)
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 credits)
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. Prerequisite: MST 103

MST 138 – Spa Bodywork, (3 credits)
This course will provide the skills and techniques to be used with Hydrotherapy, Hot Stone therapy, Aromatherapy, 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. Prerequisite: MST 103

MST 143 – Intermediate Massage, (3 credits)
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 150 – Adapting to Special Populations, (2 credits)
Students will learn skills and techniques to adapt massage therapy to the needs of special populations including clients over 55, clients who are obese, clients who are children, pregnancy and infant, end of life, and clients with disabilities. Prerequisites: MST 103 & BIO 163

MST 151 – Business – Massage Therapy, (1 credit)
This course is an introduction to business practices for the massage therapist as an independent contractor and as an employee. Students will be introduced to business structures, professional organizations, business plans, bookkeeping, legal records, marketing, professional insurance, financing, and business law.

MST 152 – Chair Massage, (1 credit)
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 credits)
This course is designed to expand on skills developed in Swedish and Intermediate Massage. Students will integrate new techniques including trigger point therapy, myofascial massage, polarity, and shiatsu in client-centered treatment planning.

MST 159 – Ethics – Massage Therapy, (1 credit)
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 credit)
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 credit)
Private applied instruction that provides students the opportunity to develop and refine performing skills.

MUA 119 – Class Piano, (1 credit)
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 credit)
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA 124 – Applied Guitar, (1 credit)
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA 126 – Applied Strings, (1 credit)
Private applied instruction that provides students the opportunity to develop and refine performing skills on a stringed instrument.

MUA 128 – Applied String Bass, (1 credit)
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA 150 – Applied Tuba, (1 credit)
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA 152 – Applied Bassoon, (1 credit)
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA 154 – Applied Clarinet, (1 credit)
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA 156 – Applied Flute, (1 credit)
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA 158 – Applied French Horn, (1 credit)
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA 160 – Applied Oboe, (1 credit)
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA 162 – Applied Saxophone, (1 credit)
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA 164 – Applied Trombone, (1 credit)
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA 166 – Applied Trumpet, (1 credit)
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

MUA 180 – Applied Percussion, (1 credit)
Private applied instruction that provides students the opportunity to develop and refine performing skills on this instrument.

## GENERAL MUSIC

MUS 100 – Music Appreciation, (3 credits)
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 credits)
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 credits)
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 credits)
Continuation of MUS120 which includes diatonic material, cadences, chord progression, inversions, chord spelling and part writing.

MUS 135 – Music Theory Lab I, (1 credit)
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 credit)
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 credit)
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 credit)
A music ensemble which studies, rehearses and performs literature for bands and wind ensembles. There is no required auditions.

MUS 149 – Pep Band, (1 credit)
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 credit)
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 credit)
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 credit)
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 credit)
Rehearsal and performance of jazz combo literature, with an emphasis on improvisation through the jazz combo or small group ensemble.

MUS 170 – Jazz Band, (1 credit)
Rehearsal and performance of jazz literature, with an annual tour, concerts, and special occasion performances. Open auditions.

MUS 175 – Woodwind Ensemble, (1 credit)
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 credit)
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 credit)
Rehearsal and performance of selected percussion works with concerts and special occasion performances. Open auditions. May be repeated for credit.

MUS 178 – Handbell Ensemble, (1 credit)
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 credit)
Teaches improvisation through various musical styles through combo or small group ensemble. Teaches students the art of instant composition.

MUS 203 – History of American Music, (3 credits)
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. Styles include fine art music, popular styles, jazz, blues, country, musical theatre, and rock.

MUS 205 – Jazz History & Appreciation, (3 credits)
Studies the elements and history of jazz music with concentration on critical listening skills. Includes a review of jazz history, styles, genres, form and content, composers, and social and historical events of the past and present that influence music selections.

MUS 220 – Music Theory III, (3 credits)
Continuation of MUS–121 including the study of advanced triadic structure and synthetic scales. Emphasis on analysis.

MUS 221 – Music Theory IV, (3 credits)
Continuation of Music Harmony principles from Music Theory III, including all modulations, form and analysis, Augmented 6th chords, Neapolitan chords, mode mixture, and 19th & 20thcentury music.

MUS 235 – Music Theory Lab III, (1 credit)
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 credit)
Continuation of principles of key relationships, intervals, triads and improvement of sight–reading musical notations. All aspects of rhythmic and melodic structure are studied and practiced. Prerequisite: MUS 235.

MUS 250 – Musical Play Production, (1 credit)
Production of a musical play; special attention will be given to singing, acting, set work, props, sound reinforcement, and lighting. Auditions for speaking and singing roles will be announced in advance. May be repeated for credit.

## COMPUTER NETWORKING

NET 122 – Computer Hardware Basics, (3 credits)
Student will learn how to prepare and evaluate system specifications, troubleshoot minor hardware problems, configure, and install hardware, manage memory, maintain and optimize operating systems, and use diagnostic software.

NET 140 – Networking Essentials, (4 credits)
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 credits)
This course is designed to provide students with the background necessary to understand the local area networking information in Microsoft courses on work–stations and networking. This course provides students with the information needed to build a foundation in current networking technology for local area networks, wide area networks, and the Internet.

## PARTS DISTRIBUTION & INVENTORY CONTROL

PAR 113 – Parts Catalog + Lab, (3 credits)
This course is 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 credits)
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 credits)
A study of various inventory control systems used by the aftermarket 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 143 – Physical Conditioning I, (1 credit)
This is an introductory course designed to provide the physical fitness basic skills to assist students in their preparation for the minimum physical fitness requirements in Criminal Justice field.

PEA 146 – Phys. Fitness I, (1 credit)
Develops an individual wellness program with emphasis on cardiovascular and muscular fitness and provides the student with periodic fitness evaluations.

PEA 187 – Weight Training I, (1 credit)
Lecture and laboratory course designed to cover the basic principles and skill techniques involved in weight training.

PEA 244 – Physical Conditioning II, (1 credit)
This course is a continuation of PEA 143. 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.

PEA 246 – Physical Fitness II, (1 credit)
Continuation of PEA 146.

PEA 287 – Weight Training II, (1 credit)
Lecture and laboratory course designed to increase knowledge, understanding and skill techniques involved in weight training. Continuation of PEA 187.

PEA 292 – Physical Conditioning III, (1 credit)
This course is a continuation of PEA 244. 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.

PEA 294 – Weight Training III, (1 credit)
Lecture and laboratory course designed to cover the advanced principles and skill techniques involved in weight training. Continuation of PEA 287.

## COACHING/OFFICIATING

PEC 101 – Intro to Coaching, (3 credits)
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 credit)
This course provides an overview of the coaching profession with an in depth look at coaching ethics.

PEC 115 – Athletic Development & Human Growth, (1 credit)
An exploration of normal characteristics and physical, social, and emotional development of indi-viduals from early childhood through adolescence. This course includes a discussion of athletic development from later childhood through adolescence.

PEC 120 – Body Structure & Function, (1 credit)
This course presents an overview study of anatomy and physiology. The relationship between body structure and function forms the basis for the course.

PEC 126 – Athletic Injury Prevention, (2 credits)
This course provides knowledge and understanding of the prevention, care and rehabilitation of athletic injuries.

PEC 128 – Care & Prevent Athl. Injuries, (3 credits)
This course provides basic recognition, prevention, care, and rehabilitation of athletic injuries. Evaluation of protective devices, and conditioning are included.

## GENERAL PHYSICAL EDUCATION AND HEALTH

PEH 102 – Health, (3 credits)
Study of the physical, mental and social dynamics of health with attention to the development of wholesome attitudes and living habits. Students learn basic information, making choices, and ap plication of steps toward establishing a healthier lifestyle.

PEH 141 – First Aid, (2 credits)
Basic lifesaving techniques and CPR as outlined by the American Red Cross.

PEH 225 – Healthy Lifestyles Management, (3 credits)
Living a healthy lifestyle, a basic overview of fitness activities, the health benefits of fitness activities, nutrition, and stress. Each unit contains basic information, choices, and application toward establishing a healthier lifestyle.

## PHYSICAL EDUCATION TRAINING

PET 105 – Basic Athletic Training, (3 credits)
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.

PET 115 – Intro to Taping, (2 credits)
Introduction to Taping is an entry level class that will introduce the student to the taping and bracing concepts and skills of the athletic training profession and blood borne pathogen procedures. The class will survey common injuries and conditions in athletics and the taping, wrapping and bracing techniques utilized to care for them.

PET 140 – Athletic Training Practicum I, (1 credit)
Supervised athletic event and practice coverage with the purpose of utilizing learned skills and becoming familiar with the working conditions of a certified athletic trainer. P/Q grading.

PET 150 – Athletic Training Practicum II, (1 credit)
This course gives students exposure to the general working conditions and various environments the certified athletic trainer is accustomed to working. P/Q grading. Prerequisite: PET 140

PET 171 – Athletic Training Practicum III, (1 credit)
This course gives students exposure to general working conditions of the athletic trainer in a professional environment. P/Q grading. Prerequisite: PET 150

PET 181 – Athletic Training Practicum IV, (1 credit)
This course gives students 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. P/Q grading. Prerequisite: PET 171

## INTERCOLLEGIATE PHYSICAL EDUCATION

PEV 110 – Varsity Baseball, Fall, (1 credit)
Study of basic and advanced fundamentals.

PEV 115 – Varsity Baseball, (1 credit)
Study of basic and advanced fundamentals as well as participation in intercollegiate baseball.

PEV 121 – Varsity Basketball, Men, (1 credit)
Study of basic and advanced fundamentals as well as participation in intercollegiate basketball.

PEV 122 – Varsity Basketball, Women, (1 credit)
Study of basic and advanced fundamentals as well as participation in intercollegiate basketball.

PEV 140 – Varsity Golf, (1 credit)
Study of basic and advanced fundamentals as well as participation in intercollegiate golf.

PEV 160 – Varsity Softball, (1 credit)
Study of basic and advanced fundamentals as well as participation in intercollegiate softball.

PEV 165 – Varsity Swimming, (1 credit)
Study of basic and advanced fundamentals as well as participation in intercollegiate swimming.

PEV 170 – Varsity Volleyball, (1 credit)
Study of basic and advanced fundamentals as well as participation in intercollegiate volleyball.

PEV 210 – Var. Baseball II, Fall, (1 credit)
This course is the study of basic and advanced fundamentals, as well as participation in intercollegiate baseball.

PEV 221 – Varsity Basketball II, Men, (1 credit)
This course is the study of basic and advanced fundamentals, as well as participation in intercollegiate basketball.

PEV 222 – Varsity Basketball, Women, (1 credit)
This course is the study of basic and advanced fundamentals, as well as participation in intercollegiate basketball.

PEV 240 – Varsity Golf II, (1 credit)
This course is the study of basic and advanced fundamentals, as well as participation in intercollegiate golf.

PEV 26 – Varsity Softball II, (1 credit)
This course is the study of basic and advanced fundamentals, as well as participation in intercollegiate softball.

PEV 270 – Varsity Volleyball II, (1 credit)
This course is the study of basic and advanced fundamentals, as well as participation in intercollegiate volleyball.

## PHILOSOPHY

PHI 101 – Intro to Philosophy, (3 credits)
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 credits)
This introductory course examines contemporary ethical conflicts and provides an understanding of the language, concepts, and traditions of ethics.

## PHYSICAL SCIENCE

PHS 113 – Intro to Physical Science, (4 credits)
A survey of the basic concepts of astronomy and physics, recommended for students who have not had high school physics. Lecture, demonstration, and laboratory.

PHS 142 – Principles of Astronomy, (3 credits)
Studies the latest astronomical discoveries and astrophysical theories.

PHS 166 – Meteorology Weather Climate, (4 credits)
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 185 – Intro to Earth Science, (3 credits)
Surveys the basic concepts of chemistry, geology, and meteorology. Same as the lecture portion of PHS 187.

PHS 187 – Intro to Earth Science, (4 credits)
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 credits)
Demonstrations, lectures, recitations, and laboratory work beginning a two-semester sequence covering the subject. Mechanics is primarily covered during the first semester. Recommended for premedical, 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 credits)
Continuation of PHY 162. Thermodynamics, electricity, and magnetism are covered in this semester. Lecture and laboratory. Prerequisite: PHY 162.

PHY 212 – Classical Physics I, (5 credits)
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 credits)
Continuation of PHY 212. Thermodynamics and electricity and magnetism are covered in this course. Lecture and laboratory. Prerequisite: PHY 212

## PRACTICAL NURSING

PNN 105 – Practical Nursing Concepts I, (7 credits)
Practical Nursing Concepts I is a class/lab/clinical course that introduces the role of the practical nurse considering history, trends, and comportment through a caring perspective. The role of the licensed practical nurse will be discussed related to safety, legal implications, and collaborative practice throughout the lifespan. The student will be introduced to the nursing process and healthy lifestyles related to physical assessment. The conceptual focus includes safety, communication, infection control, hygiene, skin integrity, elimination, oxygen principles, fluids, nutrition, mobility/ immobility, comfort, and mental health alterations. The student will practice and perform nursing skills in the lab and clinical setting while caring for client conditions.

PNN 106 – Practical Nursing Concepts II, (8 credits)
Practical Nursing Concepts II is a class/lab/clinical course that builds upon concepts related to human needs utilizing the nursing process. The student will demonstrate caring behaviors while learning about physiologic adaptations related to perioperative, acid–base balance, fluid and electrolyte, elimination, sensory, oxygenation/perfusion, mobility, stress, metabolic and protective alterations as related to the medical–surgical client throughout the lifespan. Prerequisite: Successful completion of first semester PN courses (C or better)

PNN 107 – Practical Nursing Concepts III, (6 credits)
Practical Nursing Concepts III class/preceptorship course that prepares the student for entry–level nursing practice by focusing on nursing judgment, legal/ethical issues, and assimilation into the discipline of nursing. Concepts of leadership, management, and professional development, as well as maternal new–born nursing will be taught. Emphasis is on the role of the nurse as the provider and coordinator of care with simple to complex client conditions throughout the lifespan, including the child–bearing families. Management of simple to complex human needs including: oxygenation, perfusion, intracranial regulation, mobility, and inflammation/ infection/immunity. Prerequisite: Successful completion of second semester PN courses (C or better)

PNN 135 – PN Pharmacology I, (1 credit)
PN Pharmacology I is a class/lab course that introduces pharmacological concepts and classifications. Medication administration including oral, parenteral, enteral, and intravenous therapy maintenance will be discussed and applied.

PNN 136 – PN Pharmacology II, (2 credits)
PN Pharmacology II is a course that builds upon pharmacological concepts presented in PN Pharmacology I focusing on the classification, mechanism of action of the medications and nursing process as it relates to the client/patient condition. Prerequisite: Successful completion of first semester PN courses (C or better)

## POLITICAL SCIENCE

POL 110 – Intro to Political Science, (3 credits)
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 credits)
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 credits)
This course provides an introduction to politics, government, and public policy at the state and lo–cal level, with particular emphasis on the state of Iowa. It includes an analysis of the relationship among federal, state, and local governments; the structure and powers of state and local govern–ments; the scope of political participation in state and local parties; and public policy–making by state and local governments.

POL 121 – International Relations, (3 credits)
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 credits)
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 credits)
An introduction to the scientific study of behavior; a brief history of psychology as a science, and topics fundamental to human behavior including developmental issues, sensory abilities, cognitive performance, social and emotional factors in behavior, and abnormal behavior and therapies.

PSY 121 – Developmental Psychology, (3 credits)
Studies human development from conception through the life pan. 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 credits)
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 222 – Child Psychology, (3 credits)
This course is design for students to analyze psychological development of the child in relation to the biological, physical, and sociological antecedent conditions from prenatal to adolescent stages. Emphasis on contemporary theories of child psychology, including: physical growth and development, personality and social learning, cognition and perception, and language development. Prerequisite: PSY 111 or PSY 121

PSY 223 – Child & Adolescent Psychology, (3 credits)
This course deals with the interplay of biological factors, human interactions, cultural forces, and social structures which shape the growing child from conception to adolescence.

PSY 224 – Adolescent Psychology, (3 credits)
This course 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 the crucial transition from childhood to adulthood. Prerequisite: PSY 111

PSY 241 – Abnormal Psychology, (3 credits)
A survey course tracing history, models, and symptoms of psychiatric disorders. Uses the current DSM 5 (diagnostic and statistical manual) as a standard of abnormal behavior.

PSY 251 – Social Psychology, (3 credits)
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 credits)
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: This course is designed for individuals who are or will be working in a vocational environment, which requires them to provide or become part of an educational or training program. Although the course is targeting traditional educational systems, it is directly applicable to virtually any setting in which a person may be required to help an individual or group of individuals learn and understand new information, or to develop new knowledge and skills sets. The fundamentals of this course are designed to assist the student in differentiating learning theory and processes as aspects of human development. Emphasis is placed on the roles of the educators and the students in applying the principles of learning, instruction, evaluation, and pupil management. Prerequisite: PSY 111

PSY 281 – Educational Psychology, (3 credits)
This course is designed for individuals who are or will be working in a vocational environment, which requires them to provide or become part of an educational or training program. Although the course is targeting traditional educational systems, it is directly applicable to virtually any setting in which a person may be required to help an individual or group of individuals learn and understand new information, or to develop new knowledge and skills sets. The fundamentals of this course are designed to assist the student in differentiating learning theory and processes as aspects of human development. Emphasis is placed on the roles of the educators and the students in applying the principles of learning, instruction, evaluation, and pupil management. Prerequisite: PSY 111

## READING

RDG 031 – Intro to College Reading II, (1 credit)
Individualized reading skill development designed to improve comprehension, vocabulary and reading rate. P/Q grading.

RDG 120 – College Reading, (1 credit)
An individualized elective course in reading. Prerequisite: RDG 031 or an acceptable assessment score. P/Q grading

## RELIGION

REL 101 – Survey of World Religions, (3 credits)
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.

## STUDENT DEVELOPMENT

SDV 061 – Independent Living Skills I, (4 credits)
Students learn independent, adult living skills, such as good peer relations, using community resources, exploration of interests/hobbies, meal planning, and daily living activities.

SDV 065 – Personal Management, (3 credits)
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. Critical thinking skills will be emphasized as students analyze written documents, including those financial, legal, and medical. Credit earned will not satisfy requirements for an associate degree.

SDV 075 – Strategies for Academic Success, (1 credit)
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 credit)
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 credit)
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 125 – Workplace Readiness, (1 credit)
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 credits)
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 credits)
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 credit)
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 credits)
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 175 – Tools for Life, (3 credits)
This course furthers the understanding of the interrelationships among individuals, the college, the family, work, and society. Develops leadership, study habits, communication skills and decision making abilities, especially in education and career areas. Students consider learning as a process.

SDV 182 – Human Potential Seminar, (2 credits)
This course is a structured group experience based on the assumption that many things are right for you. The course is designed to help you realize your own unique potential so that you can lead a more successful and satisfying life. This is accomplished by positive-oriented experiences that help you clarify personal values, set goals, and recognize strengths in yourself and others.

SDV 185 – Advanced Human Potential, (2 credits)
This course shares techniques to identify, prevent, resolve, and manage conflict.

SDV 191 – Positive Psychology and Wellness, (3 credits)
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 credit)
The course encourages academic excellence by providing social, recreational, educational, and cultural activities.

SDV 213 – Coop Career Experience, (2 credits)
Students will be given the opportunity to apply real world situations to hands-on learning and 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 240 – Professional Seminar, (1 credit)
Students will learn employability skills while developing professional and leadership skills. Students will create a professional portfolio, resume, and demonstrate interview skills while reviewing how to maintain their professional credential following graduation.

## SUSTAINABLE ENERGY RESOURCES

SER 101 – Energy, Sustainability & the Environment, (3 credits)
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 114 – Blueprint Reading, (1 credit)
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 credit)
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 credit)
This course presents the skills required to organize and prepare an estimate for a trade's project.

SER 124 – Industrial Safety, (1 credit)
A study of principles and practices used to establish a safe and efficient environment for personnel in the renewable energy industry and various sectors there-of. The course focuses on general industrial safety, safety and health regulatory agencies and organizations, hazard recognition and correction, and first aid.

SER 230 – Maintenance & Repair of Pumps & Valves, (3 credits)
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 credits)
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 effect 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 credits)
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 credits)
This course will explore the collection, reporting, and analysis of website data. Web analytics will focus on analyzing the effectiveness of organizations' marketing and advertising goals by identifying and reviewing the methods used to measure effectiveness. The student will analyze data through mathematical formulas to determine the success of failure of the goals. Students will look at all forms of web communications including social media, mobile, and websites.

## SOCIOLOGY

SOC 110 – Intro to Sociology, (3 credits)
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 credits)
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 credits)
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 credits)
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 credits)
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 credits)
Survey of the contributions that various minorities have made to the development of the United States.

SOC 220 – Sociology of Aging, (3 credits)
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.

## SPEECH

SPC 101 – Fundamentals of Oral Communication, (3 credits)
The fundamentals course develops the basic skills involved in a variety of communication situations, including oral presentations and interpersonal speaking. Emphasis is placed on organization, audience analysis, vocal and physical delivery, listening, nonverbal communication, critical thinking, and methods of dealing with communication apprehension through class discussion and activities.

SPC 112 – Public Speaking, (3 credits)
This course examines both the theoretical and practical basis of speech communication, particularly public speaking. Emphasis is placed on speech preparation, organization, support, delivery, and audience analysis.

SPC 122 – Interpersonal Communications, (3 credits)
Examines how humans communicate in one-on-one situations through personal and professional relationships.

## SURGICAL TECHNOLOGY

SUR 123 – Patient Care Concepts, (2 credits)
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-psychosocial 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, hemodynamics, 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 credits)
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 present-ed. 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, biomedical sciences, aseptic techniques, sterilization and disinfection, instrumentation, equipment and supplies, wound healing and diagnostic procedures.

SUR 131 – Surgical Foundations Lab, (4 credits)
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, biomedical sciences, aseptic techniques, sterilization and disinfection, instrumentation, equipment and supplies, wound healing and diagnostic procedures.

SUR 223 – Surgical Procedures, (6 credits)
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 credits)
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 credits)
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 credits)
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 credits)
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 credits)
This course 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.

## WEB DEVELOPMENT

WDV 132 – Mobile Application Development, (3 credits)
This course is designed to introduce the student to the concepts and practical uses of mobile application development. The major objective is to develop a practical approach to learn the fundamentals of mobile application development and learn how they can be applied to other Operating Systems.

## WELDING

WEL 121 – Oxy Fuel Welding & Cutting, (4 credits)
Oxyacetylene welding in correlation with identification of metals; care and use of welding equipment; selection of rods and fluxes; and safety. Lecture and laboratory.

WEL 179 – Special Processes/Procedures, (3 credits)
Ferrous to ferrous, nonferrous to nonferrous hard surfacing used in the welding field today. Lecture and laboratory. Prerequisites: WEL 121

WEL 228 – Introduction to Welding, Safety and Health of Welders, (1 credit)
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 credits)
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 credits)
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 credits)
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 – Indicator 7, Module 3– Key Indicator 3, and Module 9 – Key Indicator 2.

WEL 251 – Gas Tungsten Arc Welding for Carbon Steel, (2 credits)
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 credit)
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 I, 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 credit)
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 credit)
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 credits)
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 credits)
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 complaint 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 credits)
Develops the exacting techniques required to properly weld pipe installations. Lecture and Laboratory.

WEL 334 – Trade & Industry Welding, (2 credits)
Principles and applications of gas and MIG welding theory, safety and shop practices are covered. Lecture and laboratory.

## WIND ENERGY & TURBINE TECHNOLOGY

WTT 104 – Introduction to Wind Energy, (4 credits)
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.

WTT 116 – Field Training I, (4 credits)
Field Training I is designed to provide students with an understanding of the safety techniques used in the wind industry. Topics will include OSHA 10, First Aid/AED, tower climbing, high angle rescue/evacuation, working with tools at height, basic electrical safety, confined spaces, and basic crane safety.

WTT 136 – Field Training II, (4 credits)
Field Training II will introduce a wind turbines construction, maintenance, and operation. Topics will include construction, schematics, components, maintenance, mechanical systems, electrical systems troubleshooting, and operation. Prerequisite: WTT 116

WTT 204 – Wind Turbine Siting, (4 credits)
This course will allow students the opportunity to learn the techniques, methodology, and concepts used to develop projects around the world.

WTT 216 – Power Generation & Transmission, (3 credits)
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.

WTT 934 – Wind Energy & Turbine Tech. Internship II, (4 credits)
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.

WTT 946 – Wind Energy & Turbine Tech. Internship I, (6credits)
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.

# NOTES

# 2021-2022 CALENDAR

## FALL SEMESTER 2021

| | |
|---|---|
| August 13, 16, 17, 18 | Official Registration Days* |
| August 18 | Faculty Return |
| August 19 | Offices closed until 1 p.m. for All Employee Professional Development |
| August 23 | Orientation for Freshmen |
| August 23 | Online Classes Begin |
| August 24 | Face-to-Face Classes Begin |
| September 6 | Holiday, No Classes, Offices Closed |
| October 22 | No Classes, Offices Open, Staff Professional Development |
| November 24 | No Classes, Offices Open |
| November 25 – 26 | Holiday, No Classes, Offices Closed |
| December 9 – 15 | Final Exams |
| December 18 | Last Day of Semester |
| December 24 – 31 | All College Offices Closed |

## SPRING SEMESTER 2022

| | |
|---|---|
| January 3 - 11 | No Classes, Offices Open |
| January 6, 7, 10, 11 | Official Registration Days* |
| January 10 | Online Classes Begin |
| January 11 | Faculty Return |
| January 12 | Face-to-Face Classes Begin |
| January 17 | Holiday, No Classes, Offices Closed |
| February 18 | No Classes, Employee Professional Development |
| March 14 - 18 | Spring Break, Offices Open |
| April 15 | Holiday, No Classes, Offices Closed |
| April 18 | No Classes, Offices Open |
| May 9 - 12 | Final Exams |
| May 13 | Last Day of Semester/Commencement |

## SUMMER TERM 2022

*VOCATIONAL/TECHNICAL/CAREER OPTION*

Schedule will vary by program and will be published by the Deans' offices

| | |
|---|---|
| May 30 | Holiday, No Classes, Offices Closed |
| July 4 | Holiday, No Classes, Offices Closed |

### First Arts & Sciences Summer Session

| | |
|---|---|
| May 19, 20 | Official Registration Day* |
| May 23 | First Day of Classes |
| May 30 | Holiday, No Classes, Offices Closed |
| June 23 | Last Day of First Session |

### Second Arts & Sciences Summer Session

| | |
|---|---|
| June 24, 27 | Official Registration Days* |
| June 28 | First Day of Classes |
| July 4 | Holiday, No Classes, Offices Closed |
| July 29 | Last Day of Second Session |
| July 29 | Summer Commencement |

* For students not preregistered. This calendar is subject to change.

# FACULTY & STAFF

A compete listing can be found at www.iowalakes.edu/staff-directory

## 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

**Beth Elman (2018)**
Executive Director of Marketing
B.A., Iowa State Uni versity

**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)**
Vice President of Administration
M.Ed Iowa State University

**Daniel Lutat (2010)**
Executive Director of Foundation/ Governmental Affairs
A.A., Community College of the Air Force;
B.S., Bellevue University;
M.S., Bellevue 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

**Scott Stokes (2019)**
Executive Dean, Estherville Campus
B.A., University of Northern Iowa
M.S., Southwest Minnesota State University

**Julie Williams (1985)**
Executive Dean of Students
B.A., Mankato State University;
M.A., University of Iowa

## ADDITIONAL ADMINISTRATIVE STAFF

**Trudy Ahrens (1997)**
TRiO Director
B.A., Iowa State Univ;
M.S., Southwest Minn. State University

**Jerimiah DePyper (2005)**
Director of Technology
A.A., Iowa Lakes Community College;
B.A., Buena Vista University;
M.B.A., Ashford University

**David DeVary (2007)**
College Management Information Systems Director
B.A., Iowa State 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 Admissions
B.A., Luther College
M.Ed., Iowa State University

**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

**Jason Moore (2020)**
Building and Grounds Manager

**Oscar DeLong (2020)**
Library Director
B.A., Alma College
M.S., Indiana University School of Library
Ed.S., Northern Michigan University

**Stephen Pelzer (1998)**
Director of Financial Aid
B.A., University of Northern Iowa;
M.B.A. Southwest Minnesota State University

**Tammy Shimon (2019)**
Director of Nursing
Education B.S.N., University of Iowa

**Jack Vedder (1998)**
Building and Grounds Supervisor

**Theresa Waechter (1994)**
Algona Campus Advisor/Supervisor
A.S., NIACC;
A.A., Iowa Lakes Community College;
B.A., Briar Cliff University;
M.Ed., Iowa State University

**Neal Williamsen (1995)**
Director of Ag. Production & Operations
B.S., University of Nebraska, Lincoln;
M.S., Iowa State University

## FACULTY AND PROFESSIONAL STAFF

**Danny Acosta (2020)**
Head Baseball Coach/Enrollment Coach
M.S., United States Sports Academy

**Cody Alesch (2012)**
Head Wrestling Coach / College Completion Specialist
B.A., Wartburg College

**Carol Ayres (1988)**
Instrumental Music Professor/ Jazz Band Director
B.A., Buena Vista University
M.Mus.Ed., University of South Dakota

**Amber Bates (2020)**
Records Specialist
A.A., Iowa Lakes Community College
B.A., University of Northern Iowa
M.Ed., South Dakota State University

**Stacey Benson (2019)**
Assistant Professor, Agriculture
A.A, Iowa Lakes Community College;
A.S., Iowa Lakes Community College;
B.S., Iowa State University;
M.S., Iowa State 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

**Joe Bjornstad (2019)**
Compliance and Grant Writer
B.A., St. John's University;
J.D., University of South Dakota

**Matthew Bohl (2000)**
Powersports & Power Equipment Technology Assistant Professor/Coordinator
A.A.S., 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 Assistant Professor
Diploma, Iowa Lakes Community College

**Brian Bristow (2007)**
Science Professor
B.S., M.S., Iowa State University

**Teresa Brooks (2011)**
Nursing Associate Professor
R.N., University of South Dakota;
B.S.N., Mount Marty College
M.S.N., Walden University

**Tim Busch (2019)**
Aviation Management Coordinator
M.B.A., University of Iowa

**Karie Clifford (2018)**
Medical Assistant Specialist Professor & Coordinator
B.S.N., Millikin University;
M.H.A., University of St. Francis

**Jody Condon (2013)**
Assistant Professor, Educational Counselor
B.A., Buena Vista University;
M.S.,Southwest State University;
M.A , Buena Vista University

**Darci Curry (2002)**
Records Coordinator
A.A., Iowa Lakes Community College;
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**Brandon DeClercq (2019)**
Enrollment Coach
B.A., South Dakota State University

**Lora Devereaux (2006)**
Communications Professor
B.A., Buena Vista University;
M.A., Minnesota State University

**Bill Dickey (2017)**
Continuing Education Programmer
A.S., Iowa Lakes Community College

**Kelly Dodge (2013)**
Assistant Professor, Agriculture
A.A.S., Iowa Lakes Community College

**Monica Edmonds (2020)**
Nursing Instructor
B.S.N., Northwestern College

**Don Edwards (2014)**
Heating, Ventilation & Air Conditioning Technology Instructor

**Kayla Evans (2019)**
Paralegal/Legal Instructor
B.S., South Dakota State University

**Nicole Evans (2001)**
SAVE Program Professor
B.A., Buena Vista University;
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**Sonja Fagre (2007)**
Criminal Justice Program Assistant Professor/Co-Coordinator
B.S. University of Central Missouri

**Brett Fuelberth (1997)**
Vocal Music Professor/Choir Director
B.F.A.E., Wayne State College;
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**Michael Gengler (2013)**
Assistant Professor/Coordinator Wind Energy and Turbine
A.A.S., Iowa Lakes Community College

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Criminal Justice Associate Professor/Co-Coordinator
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**Emily Gottsche (2013)**
Welding Assistant Professor/Coordinator
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**Dana Grafft (2002)**
Surgical Technology Assistant Professor
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**Jesse Grossnickle (2014)**
Hotel & Restaurant Management Instructor
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**Sharon Hackenmiller (2004)**
Social Science Professor
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**Traci Hansen (2011)**
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**Rachel Higgins, (2017)**
Social Science Assistant Professor
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Assistant Chief Flight Instructor
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**Kendra Hough (2009)**
High School Partnership Coordinator
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Environmental Studies Instructor
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**Kaden Huntrods (2020)**
Head Swimming Coach/Enrollment Coach
B.S., Dakota State University;
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**Johnny Hurley (2005)**
Business Professor
A.A., Iowa Lakes Community College;
B.A., Buena Vista University;
M.S. Emporia State University

**Gavin Illg (2011)**
Parts Department Coordinator
A.S., Iowa Lakes Community College

**Timothy Ireland (2020)**
Career/Veteran/Military Services Coordinator
B.A., William Penn University;
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**Jason Jacobson (2004)**
Automotive Technology Program Assistant Professor/Coordinator
A.A.S., Iowa Lakes Community College

**Debra Jones (1982)**
Office Specialist Professor/Coordinator
B.S., M.S., Mankato State University

**Danie Juhl (2012)**
Dance Team Coach
B.A., University of Iowa

**Rick Kalsow (2018)**
Sports Shooting Coach
B.S., North Dakota University

**Erica Killian (2010)**
Physics Associate Professor
B.A., Saint Olaf College;
M.S., University of Maine

**Katie King (2014)**
Head Softball Coach/Student Senate Coordinator

**Zachary Kizer**
Speech/Communications Assistant Professor
M.A., Ball State University

**Troy Kleve (2006)**
Farm Equipment and Diesel Technology Program Instructor/Coordinator

**Jennie Knudson (2003)**
Institutional Researcher
B.S., Northwest Missouri State University

**Michelle Kogel (2005)**
Save Program Professor/Coordinator
B.S., Iowa State University;
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**Dawn Kollasch (2018)**
Allied Health Programmer
B.S.N., Briar Cliff University

**Autumn Larsen (2018)**
Intermediary Connections Coordinator
B.A., North-western College

**Elizabeth Larsen (2019)**
Massage Therapy Instructor
L.P.H.A., Windermere Institute of Healing Arts

**Jaclyn Leuer (2017)**
Specialized Work-Based Learning Coordinator
A.S., Rochester Community & Technical College;
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**Annette Lindquist (2011)**
Veterinary Technician Assistant Professor
A.S., University of Minnesota at Waseca

**Carl Lund (2019)**
Math Associate Professor
M.S., M.L.S., Emporia State University;
M.A., Wichita State University

**Ben MacRae**
Men's Head Soccer Coach

**Ashley Martin (2016)**
Head Women's Basketball Coach/Sports Information Marketing
B.S., Upper Iowa University;
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**Patrick McCoy (1997)**
Wind Energy Turbine Technology Associate Professor
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**Jason McKinney (2011)**
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B.S., Iowa State University;
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**Corey Menning (2003)**
Construction Technology Assistant Professor/Coordinator
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**Tanner Metz (2019)**
Science Assistant Professor
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**Corey Meyer (2017)**
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**Laure Miller (2006)**
Nursing Professor
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**Mari Miller (1999)**
Speech Communication Professor
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Secondary Education Licensure, University of Iowa

**Weston Miller (2019)**
Computer Programming & Game Design Instructor/Coordinator
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**Judy Naber (2002)**
Communications Professor
B.A., Augustana;
M.A., University of South Dakota

**Bryan Nelson (1998)**
Secondary Broadcast Media Program Associate Professor/ Coordinator
B.A., University of Kansas

**Michael Nichols (1993)**
Spanish/English Professor
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**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

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Nursing Professor
B.S.N., University of Iowa;
M.S., Southwest State Univ;
M.S.N. Walden University;
D.N.P., Walden University

**Laurie Pearson (2020)**
Cosmetology Instructor/Coordinator
Cosmetology Degree, Larson's School of Cosmetology

**Dave Petrick (1999)**
Photography, Lead Adjunct
B.A., Concordia

**Susan Pietz**
Campus Stores Coordinator
M.B.A., DePaul University

**Tom Quastad (2009)**
Agriculture Assistant Professor
A.A., Iowa Lakes Community College;
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**Melissa Regelstad (2009)**
Child Care and Early Childhood Associate Professor
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**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

**Charles Reynolds (2018)**
Automotive Technology Instructor
O.A.S., Arizona Automotive Institute

**Mark Rosenberg (2017)**
Graphic Design Assistant Professor/Coordinator
B.A., California State University, Northridge

**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
A.S., Iowa Lakes Community College
B.A., University of Northern Iowa

**Laurie Schmidt (2014)**
Professor, Success Center
B.S., Northwestern College;
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**Joseph Steele (2007)**
Science Professor
B.S., University of South Dakota;
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**Matthew Strom (2010)**
Math Professor
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Success Center Associate Professor
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**Chad Tischer (2016)**
Engineering Technology Instructor/Program Coordinator
A.A., Iowa Lakes Community College
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Digital, Social and Broadcast Productions Lead Adjunct Instructor
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Head Volleyball Coach/Success/Advising Center Instructional Assistant
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Human Services/Disability Studies Professor/Coordinator
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**Blake Viedenkamp**
Head Women's Soccer Coach/Housing Coordinator
A.A., Iowa Lakes Community College
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**Elisabeth Virkler (2019)**
Continuing Education Program Coordinator
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**Jeremy Ward (2012)**
Housing Coordinator
B.S., M.S., Iowa State University

**Kendra Webb (2020)**
Cosmetology Instructor
Cosmetology License, La James International College

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Head Golf Coach/Enrollment Coach
B.A., Buena Vista University;
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**Annette Wimmer (1985)**
Business Professor
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**Mark Zabawa (2009)**
Science Professor
B.S., Johns Hopkins University;
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**Michael Zaugg (2018)**
Veterinary Technician Program Assistant Professor/Coordinator
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**Doug Zemler (2008)**
Electrical Technology Assistant Professor/Coordinator
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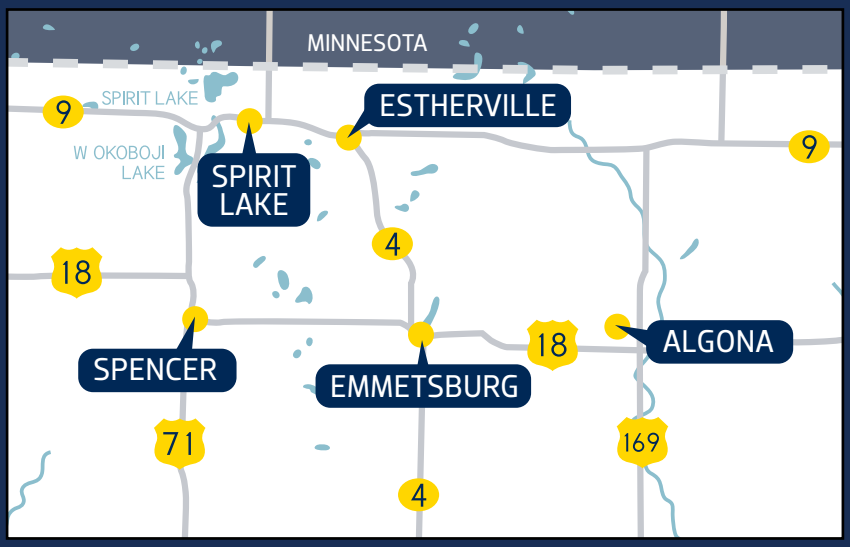


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